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ABSTRACT

The Study Committee on Yale College was established to study all aspects of the college and to make recommendations for the next 20 years of operation. Recommendations include the areas of faculty role, student admissions, student role, the setting of undergraduate life, the appropriate range and limits of choice in learning, the process of guidance, advice and evaluation, programs of study, and the problem of financial resources. (HS)

Report of the Study Group on Yale College
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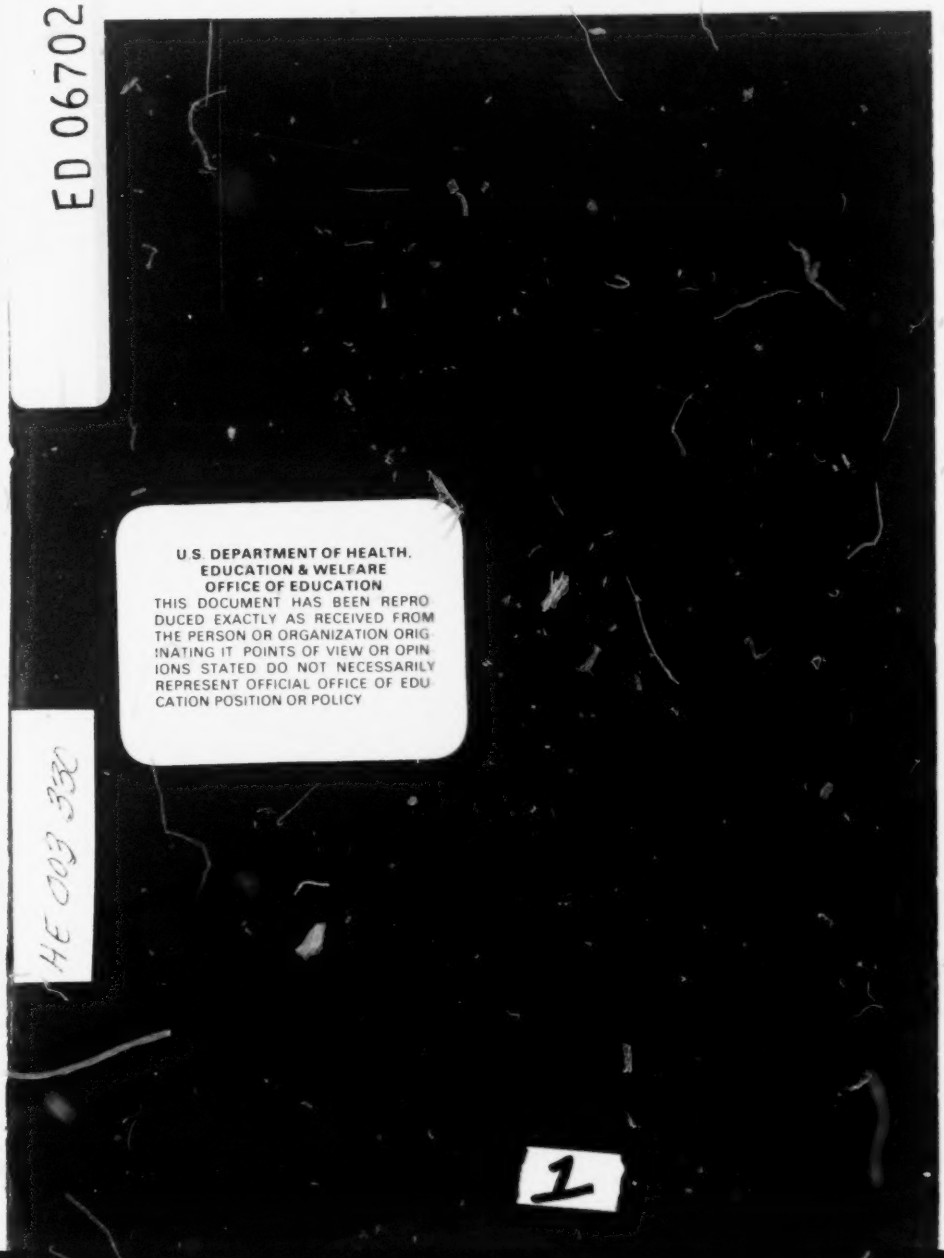

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Preface

The Study Group on Yale College, as we came to call ourselves, was appointed by President Brewster on April 22, 1971, with a very broad responsibility for making recommendations concerning the future of Yale College over the next twenty years. The nature of the Study Group and its tasks is best indicated by Mr. Brewster's letter to us:

> It is understood that no one of you is "representative" of your rank, or field, or other "constituency." Indeed, you collectively have no constituency, except your own vision about what undergraduate education ought to be for the next twenty years or so. It will be time enough for "legitimate" bodies of colleagues and students to receive and chew up your report when you submit it a year hence. You can be concerned with feasibility, especially financial feasibility, but you should not worry about agreement or disagreement.
>
> Your mandate is intended to be very broad, and, I hope, fundamental. We badly need a coherent, purposive articulation of the goals of education at Yale for those between the high school and post baccalaureate careers, or graduate and professional training for careers. This will include a re-thinking of the objectives and functions of college education.
>
> You are bound to focus sharply on the curriculum. You will also inevitably be concerned

with the appropriate relationship between undergraduate and post-graduate education. This will include the question of how long it should take to obtain a baccalaureate. Also given Yale's residential facilities, you will have to consider the curricular and extra-curricular role of the residential colleges.

Finally, in the light of your vision of what undergraduate education ought to be in Yale University, you will have to address yourselves to the question of the optimum size of undergraduate enrollment; and the role of sex, career interest, and personal and intellectual potential in the admission and recruitment of students.

This is a large order. Whatever your group may recommend, your collective views will give focus to a comprehensive reappraisal by the faculty of the ends and means of Yale College.

To discharge our responsibility, members of the Study Group invited communications from all members of the Yale community; held public meetings to receive proposals and comments; sponsored open meetings with fellows and students in the residential colleges; met informally with many students and faculty members; and met, among other groups, with the Committee on Teaching and Learning, the Scholars of the House, the undergraduate committee on Yale College, minority group students and faculty members, the Advisory Committee on Co-education, the Council of Masters, the chief administrative officers of the University, committees

appointed by President Brewster to examine the financial problems of the University, representatives of the alumni, officers of the Alumni Fund, members of the Admissions Office, members of the Divisional committees in the sciences and in the humanities, the head of the Graduate Student Senate, and faculty and administrative officers in the professional schools. The Study Group also commissioned some research of its own, including lengthy interviews with all residential college Masters and Deans, and a detailed survey of views about education and Yale among undergraduates, Yale College faculty, and the alumni classes of 1951, 1961, and 1967.[1]

Although one or two suggestions came too late for us to consider them, we are convinced that virtually all students, faculty members, University officers, alumni and alumnae who made an effort to get in touch with us succeeded in getting their views before the Study Group.

We want to record here our enormous debt to all these members of the Yale community who presented views to us or responded to our tentative, frequently abandoned, invariably modified formulations as we were working our way toward the ideas and recommendations contained in this report. Our experience leaves us without doubts as to the existence of a widespread commitment among all elements of the Yale community to the belief that Yale—College and University — should seek nothing less than the highest excellence.

In addition to the widespread help we have received from everyone interested in the future of Yale College, exceptional contributions to the work of the committee

1. Results of the survey are available on request from the Office of Institutional Research, Yale University, 340 Edwards Street, New Haven, Connecticut 06520.

were made by our administrative assistant, Elizabeth Frederick, and our secretary, Nancy Hoskins. We have also profited greatly from the research carried on by Douglas Bennett, Thomas Milch, Sarah Ford, Joseph Ford, Deborah Lee, Ellen Comisso, Jan Costello and John Hoskins.

Robert A. Dahl
William Kessen
Jonathan D. Spence
Horace D. Taft
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1 Goals

We deal in this report with undergraduate education in Yale College. We do not deal with education in general nor with colleges in general. Had we been a committee appointed to make proposals for all of American higher education or for a college or university not yet in existence, whose purposes remained to be defined, officers and faculty appointed, location selected, buildings constructed, and students recruited, our task would have been different.

We have asked ourselves what special contribution to excellence in undergraduate education Yale can make, with her particular resources, limitations, potentialities. It would be something of a waste of Yale's resources — and our time — to make recommendations for a university, hypothetical or actual, that was not in New Haven; did not have Yale's enormous investment in existing buildings and equipment; had twice Yale's financial resources, or half; had a faculty with no great ambitions toward scholarship; or could not hope to recruit highly talented students.

Different colleges and universities are and surely should be moving in different, even radically different, directions. The cause of higher education in the United States will not be adequately served by uniformity. In a nation with needs and diversities as vast as those of the United States, there can hardly be any single best design for education, least of all undergraduate education. Fortunately, this country's traditions in higher education are pluralistic. An institution shaped according to the ends and means we recommend for Yale has a critical part to play in the over-all pattern of higher education; it can play that part only because other colleges and universities serve different purposes.

It is difficult, perhaps impossible, to sum up our view of major goals in a few sentences without raising in the mind of the reader questions this whole report is designed to answer. Nonetheless, all our reflections, deliberations, and proposals have been shaped from the outset by our commitment to a single broad conception: The central goal of Yale College, and a major goal of the University, should be to offer to the ablest student body Yale can recruit the finest undergraduate education attainable within the limits of the resources available to the College. The objective of that education should be to help a student develop a central core of values, beliefs, strategies, and information that is integrated and coherent enough to enable him to lead a productive and fulfilling life in an enormously disorienting universe, and at the same time sufficiently open and flexible to allow adequate opportunities for further growth and development.

What is excellence in undergraduate education?
At its best, undergraduate education makes special contributions that distinguish it significantly from the formal education that precedes or follows it. But it also shares some qualities of excellence with all good education.

Learning throughout life. Like all education, undergraduate education is excellent to the extent that it nourishes the motivations, arts, and skills needed if one is to continue to develop one's intellectual, esthetic, and moral capacities throughout the whole span of one's life.

This is hardly a new criterion of excellence. Yet certain features of our present and future world compel us to stress it as a measure of the success or failure of a Yale education in the coming decades. For it is clear that knowledge, information, techniques, and technol-

ogies will continue to grow explosively and to change, that an adequate understanding of the world will involve a high and increasing degree of complexity. No matter what one's occupation or lifestyle may be, informed choices will require continual learning.

In order for learning to continue actively, we believe that one must acquire early and sustain indefinitely a high capacity for acquiring knowledge by independent study, self-definition of goals, and self-directed search. All higher education should therefore encourage students to ask themselves; What do I want and need to know? How may I best go about learning what I want and need to know? And all higher education should provide students with opportunities to discover answers to these questions in the most effective way. The exploration of these questions ought to be a central, not a marginal, task of a college — perhaps, indeed, of all education.

If students are to develop and sustain an enduring capacity for acquiring knowledge, we believe that they must be encouraged and allowed to assume as swiftly as they can the principal responsibility for decisions about their own learning. Viewed in this perspective, education ought not to be thought of as a process in which gifted teachers transfer knowledge to resisting students who are cajoled or coerced into acquiring knowledge during certain fixed — and fortunately brief — periods in their lives. Education ought instead to be a process that strengthens a student's own desires for understanding by responding to those desires successfully and in ways rewarding to the student. The pace at which a student can move toward full responsibility for his own education will, of course, vary with student and field. Yet it seems to us absurd to assume that the

day he earns his diploma a student will be able to take on the responsibility for his own learning during the rest of his life if he has not already assumed that responsibility during the years before he graduates.

Learning is of many kinds, and we do not deprecate the value of practical learning. Yet in a world as complex as we know ours to be, one's own direct experience is bound to be an excessively limited, though important, path to knowledge. Even the way one interprets direct experience will depend on categories, assumptions, and ways of thinking brought to that experience and shaped by more indirect ways of encountering knowledge.

On the other hand, except for a minority of our students life-time learning will require something other than preparation for the life of the scholar. Most of our students will neither end their formal education on graduating from college nor become Ph.D's, university teachers, or scholars.

As recently as a quarter century ago, college was pretty much the end of the line in formal education for most Yale students. They assumed that graduating from Yale College provided credentials good enough to insure entry into the careers to which they aspired. This is no longer true. Doubtless it will be increasingly less true over the next twenty years. To more and more students, a college education is regarded as an inadequate preparation for later life. For the majority of our students — and the proportion will probably grow even larger — some sort of further education is felt to be desirable. Like the secondary education of the college-bound student a generation ago, the college years are increasingly followed by some additional period of education — usually of a more specialized kind.

If it is essential to keep this fact before us in con-

sidering the future of Yale College, the change must also be kept in accurate perspective. For it is simply not the case, as some of our colleagues may have assumed, that the increasing academic capacity and intellectuality of Yale undergraduates means that many of them will be scholars. Of the class of 1961, 8% earned Ph.D's; of the class of 1964, 7%. Of 970 members of the class of 1964, by 1971 there were 77 teaching, 50 who classified themselves as scientists, and 98 enrolled as students. Thus even by the most generous estimates only a quarter of the members of the class of 1964 were committed to scholarly careers. Subsequent graduating classes have not changed this pattern. In recent years about one senior out of six has planned to begin graduate study in the arts and sciences during the year following graduation (Table 1). Even counting seniors who said they had plans for eventual graduate study in the arts and sciences, the ratio was less than one in four (Table 2). Of these, many had in mind careers other than scholarship or teaching. Only around one-seventh to one-tenth of recent graduates planned careers in education. Around a third had definite plans for law or medical school.

It seems likely, then, that in the near future as in the past only a minority of Yale graduates will go into the world of scholarship, while a majority will probably enter the professions, business, and public affairs. If it is roughly correct to think of undergraduate education as a crucial but not terminal stage in formal education, it is quite wrong to think of it as transitional to a Ph.D. and a life of scholarship, research, and teaching.

Granting that one test of excellence in undergraduate education is the extent to which it strengthens and consolidates predispositions toward continual learning, what is unique or distinctive about the college years?

Goals

Table 1 Yale Seniors, 1968-71: Fields of **Immediate** Graduate and Professional Study[1]

	Number[2]	Per cent			
		1971	1970	1969	1968
Arts & Sciences	144	16%	16%	17%	18%
Business[3]	19	2	2	3	4
Law	139	15	13	12	14
Medicine	110	12	13	11	12
Other Professional	54	6	2	2	3
Total Graduate and Professional Study	466	51	46	45	51
Other Plans	452	49	54	55	49
Total	918[2]	100%	100%	100%	100%

1. "Immediate" plans are defined as for the fall term following graduation, e.g. fall of 1971 for Class of 1971.
2. Figures for 1971 are from 918 returned questionnaires (83%) of 1,111 degrees granted.
3. Includes: Administrative Science, Business Administration, Hospital Administration, Management, etc.
Source: Office of Institutional Research.

Table 2 Yale Seniors, 1969-71: Fields of **Immediate and Later** Graduate & Professional Study[1]

	Number[2]	Per cent			
		1971	1970	1969	1968
Arts & Sciences	177	19%	21%	24%	24%
Business[3]	26	3	4	3	10
Law	188	20	22	23	22
Medicine	120	13	15	17	14
Other Professional	63	7	2	2	6
Unspecified	23	3	9	1	9
Total Graduate and Professional Study	597	65	73	70	85
Other Plans	321	35	27	30	15
Total	918	100%	100%	100%	100%

1. "Immediate" includes all those from Table 1. "Later" includes many Graduates who had applied to graduate and professional schools and who: (a) were accepted, but deferred entrance until 1972, (b) had not been accepted at the questionnaire date, or were on a waiting list, but who intended to persevere until accepted, (c) had intervening service obligations or planned to work to accumulate funds. The largest number was in (b). A third category, "possible eventual" graduate study, was also polled in 1971. These had a definite intervening plan, but expressed an ultimate ambition to return to school for advanced training. With the question so framed, the cumulative number of respondents in the three categories was 806 — 88% of all who responded.
2. Figures for 1971 are from 918 returned questionnaires (83%) of 1,111 degrees granted.
3. Includes: Administrative Science, Business Administration, Hospital Administration, Management, etc.

The answer is that to most students these years should provide a special opportunity for establishing certain kinds of intellectual foundations on which later learning may be built. This opportunity is most easily described by two general principles to which Yale College has been committed for half a century: concentration and distribution. The depth of learning achieved in college distinguishes it from secondary school; the breadth of learning distinguishes it from graduate and professional training. The combination lends to undergraduate education its special importance in the development of the student, and, at its best, much of the special intellectual charm of undergraduate education. The scholar-teacher, as we shall argue later, must play a key role at Yale in assuring that students achieve the right combination of distribution and concentration. Yet if the scholar preoccupied with the complexities of his own subject forgets that it is undergraduates he teaches, not candidates for the Ph.D. in his field, the principles of distribution and concentration may accomplish little more than exposing students to fragments of scholarly learning.

Concentration. By concentrating on a subject, field, discipline, or problem, the undergraduate is expected to acquire more knowledge in depth than he has known heretofore, and thus to gain an understanding of what true mastery might mean. The distinctiveness of the college today is not the mastery of a particular subject or discipline. The average entering freshman at Yale is probably more competent in science and mathematics today than the average graduating senior at Yale a generation ago; few academic subjects can be truly mastered in college or for that matter in a life-time. Yet the college continues to make an essential contribution. To special-

ize before college would entail too great a loss of distribution; to seek breadth in graduate and professional education would entail too heavy a cost in acquiring mastery over a field. The college is neither an extension of secondary school nor primarily preparation for graduate and professional training. To be excellent it must be different from both.

What strikes us as wrong with concentration is not the principle but the practice. In many cases, it is appropriate for a student to shape his concentration according to a departmental definition. Yet there are many ways of carving human knowledge and the departmental slice is only one. If we are to honor the larger principle of concentration we need to free students more than we have in the past from the obligation to major in a departmental field. We return to this point later on.

Distribution. It is in college that the student first has a chance to acquire enough of a grasp of the major ways of understanding and interpreting the world so that he can begin to make intelligently the choices that will hereafter govern his learning. Secondary education cannot go much beyond equipping a student with the fundamentals; the more specialized education that typically follows college may actually narrow one's range of vision. Undergraduate education should and can fling open the doors.

In view of the need for continual life-time learning, it would be wrong to think of the principle of distribution as an effort to insure that Yale College graduates are "educated" — as if to be educated means to have been educated. On the contrary, what distribution should do is to provide the best foundation possible for subsequent intellectual, moral, and esthetic growth.

Problems arise not so much because the principle is wrong but because it is difficult to apply. Few faculty members are prepared to say that students can ignore their own particular field. The number of "essential" fields or areas thus threatens to multiply beyond reason. The problem has been attacked by grouping fields into a more manageable number; but any grouping of fields is to some extent arbitrary. Newly emerging areas of knowledge may simply be tucked into conventional categories where they are easily ignored in favor of more traditional subjects.

Finally, the introductory courses to which most students must turn to acquire some understanding of an unfamiliar area are often designed with potential majors in mind and may be poorly suited to the needs of the non-major. It is difficult, often, for highly specialized scholars to take the needs of the non-major seriously — or to know how to respond to them.

College as cafeteria. Faced with difficulties of this kind in applying the principle of distribution, and given the limitations of departments as exclusive bases for concentration, a discouraged faculty could easily give up in despair and simply allow students unrestricted and unguided choices. Yet the college-as-cafeteria easily slides into a disaster of mediocrity. It risks failing in two ways. In the first place, manifold choice is not necessarily sensible choice. The richness and diversity that constitute much of the strength of Yale's educational offerings can be a source of perplexity to the student. The incoming freshman can hardly be expected to grasp more than a fragment of the array before him. Yet even seniors, as they frequently lament, have barely begun

to realize, too late, what riches they have passed by. To be sure, some floundering is inevitable and for most students it is, up to a point, probably even desirable. But the fact remains that a multiplicity of choices without adequate information does not make for reasonable choices. To that extent what looks like free choice is in reality often severely limited by ignorance. In these circumstances, a choice that is unintentionally limited by the inexperience of the student is likely to be worse than a choice that is intentionally limited by an experienced faculty.

A second defect of the college-as-cafeteria is the high risk it runs of leaving the student more disoriented than he was when he arrived, without means to gain a sense of direction. Of course students ought to be shaken up by their undergraduate experiences. But to leave them directionless can hardly be one of the desirable aims of education. Typically, during the college years a young person's values begin to crystallize and his perspectives begin to take on coherence; looser, less coherent patterns of development are drawn together to provide ways of interpreting, evaluating, and acting on the world that one carries through life, pretty much intact. This integrating process ought not to be indefinitely deferred, and cannot be without great costs to the individual. An uninformed or casually informed search for courses to satisfy largely unexplored purposes seems to us likely to leave the student without much sense of direction in a world where complexity and swift change make it difficult at best to know where one is going.

Responsibilities. To reconcile the faculty's responsibility toward students with the students' responsibility

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for their own education seems to us to impose certain responsibilities on the College.

First, since not all young people are equally prepared to assume responsibility for their education, Yale has an obligation to admit students who are so prepared. Fortunately, in our judgment, the bulk of the students who now come to Yale are able to take on the kinds of responsibilities we propose. It would be unfair to impose curricular requirements for all simply to control the student who wishes to evade responsibility. Moreover, it would be largely futile, for the one generalization that seems well supported by long experience is that most students who have the will to do so can find a way to beat almost any system of educational requirements. Students who cannot or will not handle the academic responsibilities we propose should not be at Yale.

Second, Yale has an obligation to insure that in assuming responsibilities and making choices, students have appropriate opportunities to be adequately informed. The questions we suggested earlier as central to education — What do I want and need to learn? How may I best go about learning it? — cannot be answered by the student, unaided. Students have a right to expect, and the College has an obligation to provide, a satisfactory way of searching for answers. We believe that advice to and consultation with students are presently insufficient at Yale. Nor can we draw much comfort from observing that student advising and consultation seem to be equally or more unsatisfactory at most other institutions of higher education. If the questions we have posed are truly central and not marginal, then the process of student-faculty consultation on programs must move from a marginal to a central position in the activities of both students and faculty members.

Third, however, Yale has an obligation to see that advice and guidance are neither oppressive nor idiosyncratic. If the faculty as a whole has come to believe that it is unwise to impose a single program of instruction on all students, the individual faculty member can hardly be permitted to impose his own particular educational perspectives on the students he is advising. At a minimum, the faculty should continue to express its commitment to the notion that an educated understanding is facilitated by acquiring knowledge of substance or approaches in each of a number of broad divisions of knowledge. Its collective view would serve, as it does now, as a guideline rather than a set of fixed requirements. In creating a more effective system of advising — in Chapter Six we offer some detailed recommendations to this end — the faculty will also need to establish an adequate system of review in order to insure not only that the guidelines have been properly understood and taken into account but also that neither the guidelines, the particular views of an advisor, nor the uninformed choices of a student will impose a program of study poorly suited to the particular student's own educational needs.

Yale's special excellence. We have offered one criterion of excellence that could apply to education in general and two principles that could apply to any liberal arts college. But as we said at the outset, we are dealing with Yale College.

Can Yale make a special, even unique contribution to excellence? We believe so, and a vision of her uniqueness has been central to our conception of Yale College and its educational mission. In an institution of Yale's size, the strength of the College is to be found in a com-

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bination of exceptional rarity: The College is small enough to provide much of the accessibility, responsiveness, humaneness, and community that are the virtues of the best independent liberal arts colleges; the University has a scholarly faculty large enough and other resources rich enough to provide undergraduate instruction of extraordinary range and depth.

Yale's opportunity as College and as University is to maximize the benefits of this combination and to minimize its costs. To fulfill this promise seems to us to require at least five conditions:

Appropriate scale
Excellence in the faculty
Excellence in the students
Excellence in the social, intellectual, and physical setting
Excellence in the structure and processes of learning and growth

We deal with these conditions in the rest of our report.

2 | The Proper Scale

If Yale is to combine the virtues of the best small independent liberal arts college with the virtues of the great university of research scholars, how large should it be? Specifically, how large should the College be?

There may very well not be a single optimal size for colleges and universities in general. Yet differences in numbers of students and faculty do have qualitative consequences. The special ethos, style, character, quality, identity of a college are related to its size. Differences in size are associated with qualities that attract or repel particular students or faculty members. Thus the size of a college may encourage and reinforce certain qualities and discourage others.

Like many other colleges and universities, over the years Yale has increased in size along almost every significant dimension. Both the College and the University have increased dramatically in size in the last thirty years. These changes have been associated with others: an increase in the relative size and importance of the University, particularly the Graduate School, a corresponding decrease in the relative size and importance of Yale College.

Both the College and the University now confront a serious crisis of growth, more serious, perhaps, than any confronted up to now. The way this crisis is resolved will have profound consequences for the quality of the College and the University, and the chances for combining the best a liberal arts college can offer with the best that a great university can provide.

The crisis arises because of a familiar conflict: increasing scale can bring both larger revenues and a deterioration in quality. In the face of this conflict, the economic argument typically has an advantage arising from differences in our ability to measure different aspects of

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change. Numbers of students and faculty are easily measured. The direct consequences of different numbers of students and faculty for income and expenditures can be estimated with some confidence. But changes in quality resulting from changes in numbers of students and faculty can only be guessed at. One observer's hunch that quality will decline is neutralized by someone else's hunch that quality will not decline or, for that matter, may even improve. When there is a conflict between the demonstrable economic gains from increasing size and the undemonstrable deterioration in quality that might occur, the argument on grounds of economy is very likely to prevail over the argument on grounds of quality. Since the reasons for any given small increase in size seem reasonable, in educational institutions as in others decisions tend to favor incremental increases in size. A series of incremental increases may drastically transform an institution in ways no one had ever intended; yet it is only afterward, and often too late, that it becomes clear to all how much the alleged economies of scale have been more than offset by the deterioration in elusive but highly important qualities of collective life.

Difficulty in forecasting the qualitative consequences of quantitative changes tends to influence decisions, in universities as elsewhere. Net income can be increased by reducing the size of the faculty and hence the outlay for salaries, or by increasing the size of the student body and hence the income from tuition, or both. In the face of considerations like these, hunches about a decline in quality are weak evidence. Decisions are likely to favor incremental increases in the number of students. Yale is now in the midst of a reduction in size of the faculty. Should the number of students, specifically undergraduates, now be increased?

The arguments for doing so are preponderantly economic: if the faculty does not increase, or even grows smaller, the increase in tuitions that would result from an increase in the number of students in Yale College would have undeniable economic advantages. It is also argued that if it is desirable to admit more women, this goal should be achieved not by reducing the number of men but by increasing the number of women, thereby increasing the size of entering classes. Since we shall discuss coeducation in Chapter Four, we shall not elaborate the argument or our reservations here.

Over against these arguments is a widespread conviction that the College is already large enough, if not in fact too large; that the place is stretched to the limit of its capacities; and that any further increase in size will damage quality, perhaps irreparably. Although a few students and faculty members express the belief that Yale College would be better if it were larger, from our discussions we are convinced that an overwhelming proportion of the faculty and students is opposed to a larger student body.

Given these conflicting perspectives, estimates, and hunches, what is the answer to our question? How large should Yale College be? We think that an answer must meet the following criteria:

> The faculty should be large enough to attract and retain scholars and graduate students of the highest quality.
>
> The number of undergraduates should be small enough to insure that the College can maintain a high quality of instruction; a high degree of direct, personal communication and

responsiveness among faculty, administration, and students; and a quality of life in the residential colleges and in Yale College as a whole that will enhance both intellectual and personal development.

We share the widespread conviction that the College is as large as it can be without seriously impairing its capacities for achieving these criteria. We therefore recommend that:

1 The number of students in residence in Yale College should not be increased.

2 The residential colleges should not on the average have more than three hundred undergraduate members, including freshmen.

Clearly, these recommendations suggest the need for close consideration of the housing of freshmen, the use of the Old Campus, and additional housing for undergraduates. We return to these problems in Chapter Five.

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3 | The Faculty

Maintaining a proper scale is a necessary condition for one element in the combination that represents Yale's special excellence. Maintaining excellence in the faculty is a necessary condition for the other. Depth and diversity of teaching and learning in the College are made possible by the presence of a comparatively large University faculty whose members can offer instruction and supervision over a very broad range of subjects to as great a depth as most undergraduates will penetrate, and whose scholarly needs insure at Yale a variety of exceptional resources for learning — libraries, laboratories, computer facilities, and so on. Because the College is small, undergraduate education is carried on in an environment of the humane proportions that seem appropriate to a liberal arts college; because the teaching faculty of the College is virtually identical with the faculty of Arts and Sciences of the University, undergraduates are insured a range and depth of instruction possible only in a university.

The Scholar as Teacher

The fact that in recent decades Yale has become increasingly committed to the scholar-teacher should not blind us to the possibility that this solution might prove to be unworkable in the coming decades. There are, after all, other solutions. Many students are, like many alumni, ambivalent — to say the least — about a faculty of scholar-teachers. They may be pleased with Yale's renown and may recognize that the University's eminence depends primarily on the eminence of its faculty. At the same time, however, they frequently suggest that the price of scholarship is too high; they tend to trivialize scholarship and research by reducing them to the slogan "publish or perish"; they believe that the "good teacher

but mediocre scholar" ought to remain, the "good scholar but mediocre teacher" ought to go.

Correspondingly, scholars are often vexed by the demands of the College. Teaching, advising, and the usual task of helping to run a complex institution — a responsibility accentuated in times of crisis — can make research so difficult to carry on that an opportunity for full-time scholarship without teaching may seem more attractive. If such opportunities are frequently available and sought, the centuries-old institution of the university founded on the scholar-teacher could then gradually fade away in this country, to be replaced by organizations for research and scholarship on the one hand and teaching institutions on the other.

Should Yale continue the attempt to combine scholarship with undergraduate teaching? The question needs to be squarely faced. To abandon the attempt would make Yale radically different from what it has become. Yet to continue that combination requires a genuine and wholehearted commitment to gain the advantages, to reduce the disadvantages, and, in the end, to bear the costs for the sake of the benefits.

The essential reason for combining scholarly research with teaching is that the combination is an economical and effective way to attain two major social goals: to educate, and to discover new knowledge. There is not much doubt that the two goals are not merely compatible but mutually reinforcing in graduate and professional schools. The harder question is whether they are or can be sufficiently complementary in an undergraduate college so that a marriage of research and teaching in the same faculty is preferable to a divorce.

Within limits, teaching, including undergraduate teaching, does not impede research and may often help

it. Several studies have found that among scientists and engineers, for example, full-time researchers actually publish less than those who spend some of their time on teaching or administration. Teaching provides a change of pace. Encounters with students can be stimulating and refreshing. In most subjects, an undergraduate course offers the scholar a chance to synthesize, create an overview, test out ideas. A great many scholars in all fields and at all ranks testify that undergraduate teaching can be highly rewarding both in itself and in its consequences for their own work.

Teaching might be regarded as the price a society or a university exacts from scholars in return for granting them some of the resources they need in order to live and to engage in research. This view of the eager scholar but reluctant teacher, harried into teaching in order to make a living, does not in our judgment fit the faculty of Yale. The opportunity Yale provides the full-time members of the faculty of Arts and Sciences to teach both undergraduates and graduate students is one of the features that, in addition to opportunities for research, attracts scholars to the place. This does not mean that faculty members are all equally attracted to undergraduate teaching; nor do all forms of undergraduate instruction — lecture, seminar, tutorial, senior essay, and so on — hold the same attraction for every member of the faculty. But few members of the faculty want to be cut off from undergraduate teaching.

If undergraduate teaching can be combined with scholarship, with no detriment and even some gain to scholarship, what are the consequences for teaching? Clearly not everyone who goes to college would profit most from teaching by a faculty of scholars. Those who will gain most are doubtless only a minority, and quite

possibly a very small minority, of all college students. If Yale is to preserve the scholar-teacher, its students need to be drawn from that minority. For the highly motivated and properly prepared student, teaching carried on by a faculty of scholars at a university that combines undergraduate, graduate, and professional education offers a kind and quality of undergraduate education that is impossible to provide at an institution where these functions are divided.

If the functions of scholarship and undergraduate instruction were divided, Yale's present range and depth of instruction would be impossible without a far more lavish outlay of resources than Yale or any other university has ever had, or is likely to have in the forseeable future. If with no increase in outlays, the functions of scholarship and undergraduate instruction were divided, then either the College would become a weak, subordinate unit within the University, or the University would become a mere appendage to the College.

In the longer run, the second alternative would be as injurious to the distinctiveness of Yale College as the first. Let us suppose that the Faculty of Arts and Sciences at Yale were split into two parts of about equal size, half, say, to consist of scholars teaching in the Graduate School, half of teachers (not research scholars) in the College. The drastic shrinkage in the number of scholars would have two reinforcing effects: neither the best graduate students nor the best scholars would continue to be attracted to Yale. Scholars are attracted in part because of the presence of a critical mass of other scholars in and outside their specialty, and by a critical mass of graduate students of exceptional quality. Half the size of the present faculty would almost certainly be too small. An exodus of scholars to other institutions

would begin. Graduate students would follow the scholars, intensifying the exodus of scholars, and in turn amplifying the loss of graduate students. What would be left would be an inferior graduate school and a college with a full-time teaching faculty.

In these circumstances, the college itself would almost certainly deteriorate. Lacking the stimulus of scholarship and the challenge of scholarly colleagues, the teachers would deteriorate as teachers. For if our initial assumptions about rapid change and the explosion of knowledge are correct, then the danger of obsolescence in teaching is now greater than ever, and no doubt will become even greater in the future. While the danger may be slightly less serious in the humanities, where many of the works studied are imperishable even if interpretations change, in the sciences and social sciences an explanation or a body of data adequate a year or a decade ago may be unacceptable today. In any field the instructor whose own learning is seriously out of date is inadequate not only because he misinforms his students but because he fails to convey to them the excitement and importance of continual learning over a whole life-time. The most powerful incentive for keeping abreast of one's subject is sustained interest in carrying on research at the frontiers. For the teacher whose only relevant audience is his own students that incentive is likely to be much weaker.

Moreover one aspect of scholarship that is often seen by students as hostile to teaching is, in the end, a key guarantee of the integrity of teaching. This is the fact that the scholar is deeply involved not just with students nor only with his colleagues in the university but with other scholars in a national and international community. There is probably no greater insurance that a teacher

brings high intellectual standards into the classroom than his own participation in a far-flung community of scholars who scrutinize his work with a severity that most students have not encountered.

Yet it would be glossing over difficulties to insist that all scholars are effective undergraduate teachers. The scholar is often tempted to see undergraduates as, in effect, budding graduate students; as we have seen this view of Yale students is quite wrong. The scholar is often tempted, too, to define questions and problems as if undergraduates shared his own scholarly interests, and thus sometimes fails to connect what he knows with what the student needs to know.

Nonetheless we are convinced that most members of the Yale College faculty aspire to teach undergraduates and would like to teach them well. Defective teaching is more likely to reflect poor technique than any lack of desire to be a good teacher. A more fundamental problem arises because the faculty member must typically divide his attention among a variety of obligations and opportunities, of which the instruction of the undergraduate is necessarily only one. Others include the instruction and supervision of graduate students, research, departmental and university goverance in its innumerable manifestations, participating in professional associations and meetings of various kinds, and quite possibly responding to demands for civic or public activity. Each of these could easily be a full-time job. To the undergraduate, the unwillingness of a faculty member to devote all his time to undergraduates may look like laziness or indifference. To the faculty member who tries to meet all the demands made on him, the burden may seem crushing. In our judgment, the demands made on the time of the faculty are heavy enough to preclude a sig-

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nificant increase in the amount of time most of them devote to undergraduate instruction.

If we accept the role of the scholar-teacher as appropriate for the faculty of Yale College, what can be done to improve the quality of teaching? The traditions of Yale College and the commitment of the faculty to the careful education of undergraduates have probably protected the high quality of teaching longer at Yale than at many other American universities. Nonetheless, the growth of the faculty, the disproportionate growth in the number of courses taught, and changes in emphasis of the faculty's work over the last decades have, even here, put teaching in second place. We believe that it is time to restore the status of teaching in the University. There are a number of ways in which the restoration may be begun and some may require reducing the isolation of the classroom.

To be sure, there is an intimacy in effective teaching that resists exposure to critical observation, and we cannot propose that teaching sustain the same degree of meticulous examination that we give to the scholarly achievement of our fellow faculty members; but it seems appropriate to make several restrained modifications in our present evaluation of teaching, a procedure that depends too much on hearsay and the word of the outspoken student. We therefore recommend that:

3 The Office of Institutional Research should continue to assist members of the Faculty in the construction of questionnaires and interviews to provide information about the strengths and weaknesses of their teaching.

4 There should be established, either by department or by division, an Advisory Panel on Teaching, a group of faculty members who are generally held to be effective teachers of undergraduates. Members of the Panel would encourage visits to their own classes by other faculty members, particularly those newly appointed, and would participate in occasional discussion with other faculty members on the preparation and conduct of effective lectures and seminars. They would also contribute to a library of videotaped examples of effective teaching. On request from a faculty member, a member or two of the Advisory Panel would examine his syllabus, discuss with him his handling of student consultations, share observations on the character of his teaching, and so on.

5 Faculty members, particularly those teaching for the first time, should be encouraged to examine their own teaching. Videotaped samples of teaching should continue to be prepared on request — to be viewed in solitude or with the help of a colleague, perhaps from the Advisory Panel on Teaching.

6 Meetings of graduate students should be held, on either a departmental or Divisional basis, to provide an opportunity for future teachers to review what is known about teaching and to explore, in a protected setting, their skillfulness as teachers.

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Although this report deals with the College, we emphasize the importance of scholarship and the Graduate School in part because it would be easy to ignore the contributions these make to excellence in the College. Yet the fact remains that undergraduate education in the College is one of the primary tasks of the University. Responsibility for fulfilling that task inevitably rests mainly on that large proportion of the Faculty of Arts and Sciences who teach undergraduates.

Among a faculty of scholars it is tempting to make appointments and promotions exclusively on the basis of scholarship and research, and to assume that a capacity for teaching undergraduates is, by comparison, less consequential. A bias of this kind could — and in some institutions has — led to a degradation of the college. In making appointments and promotions, which will determine the future of the Faculty of Arts and Sciences and thus the quality of undergraduate education in the College, it is the obligation of departments, appointments committees, and the faculty as a whole to concern themselves with a candidate's qualities as an undergraduate teacher. We therefore recommend that

7 During the process of appointment and promotion, chairmen should be asked to give a systematic and detailed presentation of the evidence for the effectiveness of candidates as undergraduate teachers.

Gaps in the Faculty

One possible source of difficulty with a faculty of scholar-teachers is that the range and variety of faculty members appointed to fill existing and historically defined scholarly fields may not adequately meet all the

important needs of undergraduates. In two respects, the faculty of Yale College as it now stands seems to us too narrowly defined for the requirements of effective undergraduate education.

To begin with, the faculty of Yale College, like the faculty not only of the University but of most other colleges and universities, shows distinctly the consequences of age-old discrimination against women and disadvantaged minorities. Ours is not the first report to call attention to this fact; and it might seem irrelevant to mention this now familiar problem in a report that is devoted only to the future of undergraduate education at Yale. We do so not to make another plea for justice but because a Yale College faculty member performs more roles for students than that of instructor in the classroom. The teacher often provides something of a model and a guide as well, particularly to students from groups in which the university teacher, the scholar, or the professional is still a novelty. Students from such groups are more likely to find in a faculty member who shares some of their experiences a person whom they can emulate, and seek out for advice. Equality of opportunity in higher education will not be achieved until members of minority groups and women participate in the academic community not only as students but also as faculty members and administrators. As the number of women and minority group students increases at Yale, as we expect it will, the need for more faculty members from these groups will intensify. The small number of women and members of minority groups now on the faculty are already overwhelmed by demands on their time and emotional energies. We therefore recommend that:

8 Efforts to recruit a larger number of members of minority groups on the Yale College faculty should be intensified at once.

9 Special efforts should also be made to increase the number of women on the Yale College faculty. Recommendations made by the Committee on the Status of Professional Women at Yale should be promptly implemented.

Furthermore, the College faculty rarely offers a place to creative artists — even though they may teach undergraduates. In Chapter VI we shall discuss the place of the creative arts in the College. There we set out reasons for our recommendation that:

10 All faculty members of the University with major responsibilities for the creative arts in Yale College should receive joint appointments to the Yale College faculty.

The Graduate School

There are many points at which the future of Yale College cannot be considered seriously without a simultaneous consideration of the Graduate School. We shall call attention here only to the most obvious and important of these points of common concern.

Despite the different goals of undergraduate and graduate education, many students can cross the line between graduate and undergraduate courses, a line that has probably been too deeply and firmly drawn. There are distorting myths on both sides about quality of instruction and character of students; but undergraduates and graduate students can, in many instances,

mutually profit from meeting in colleges, classrooms, and offices. We therefore recommend that:

11 Directors of Undergraduate and Graduate Study should examine their curricula to determine when and how courses can best be made accessible to both graduate and undergraduate students.

Later in this report we make proposals that will call for a substantial increase in the commitment of graduate students to teaching in Yale College. It is our hope that this will be accompanied by [redacted] other essential changes. We therefore recommend that:

12 Graduate students participating in the Mentorship program (described in Chapter Six) should become members of College Fellowships for the term of their teaching.

Roles in departments. As graduate students become more deeply involved in teaching and advising undergraduates, it will also become necessary to enlarge their participation in departmental planning of the curriculum.

Academic Calendar. Whatever decisions are made by the faculty of Yale College on reform of the academic year, we believe that it is essential that the calendar of the Graduate School be considered in the decision and that the Faculties make mutually consistent decisions about the shape of the academic year.

13 In considering any change in the academic calendar, the College faculty should assure itself that the change will be congruent with the proper functioning of the Graduate School.

Housing. Though it is not specifically a Yale College problem, we believe that serious attention should be given to the problems of graduate student housing. Every effort should be made to raise the funds for a graduate dormitory on the Tower Parkway or a nearby site. Should that prove impossible, plans for private development — either independently or in conjunction with the University — should be energetically pursued. In addition, the feasibility of incorporating graduate students more closely into the life of Yale College should be thoroughly investigated. If vacancies occur in rooms within the colleges, graduate students should be allowed to live in them. Yale should also continue to allow some graduate students to be affiliated with the residential colleges.

These and other factors have made it clear to us how very much the special promise of Yale College in undergraduate education depends on the excellence of the Graduate School. Thus the futures of the College and the Graduate School are more interdependent than the recommendations on the College might suggest. We therefore recommend that:

14 The President should appoint a study group on the Yale Graduate School broadly charged, as was the Study Group on Yale College, to make recommendations bearing on the future of the Graduate School over the next twenty years.

4 The Students

Excellence in students does not follow inevitably from the kinds of excellence in the faculty that we have just described. If we assume a College faculty mainly of scholar-teachers, then only some kinds of students will profit greatly from their teaching.

Conversely, a radically different kind of faculty might be desirable if one were to assume the presence of a student body as it might have been in Stover's day when

> "Every hour was taken up with the effort of mastering his lessons, which he then regarded, in common with the majority of his class, as a laborious task, a sort of necessary evil, the price to be paid for the privilege of passing four years in pleasant places with congenial companions."

Even if Yale were much larger than it now is or is ever likely to be, obviously it could admit only a microscopic percentage of all students who go to college. Unless it grows much larger, it can admit only a fraction of the students who actually apply.

It is self-evident, then, that no matter what admissions criteria are adopted, the College will necessarily discriminate in favor of some candidates. If Yale were the only center of undergraduate education in the United States, no solution could be found that would not seem profoundly unjust. Fortunately this is not the case. As we emphasized at the outset, the great diversity of educational needs in the United States is met by a great diversity of institutions; the cause of higher education would be ill-served if all were designed for the same students and the same educational purposes.

Who should come to Yale?

Out of the vast pool of students who intend to go to

college, what kind of person should Yale seek to identify and to admit? Although it is difficult to spell out specific criteria, we offer several guide-lines.

Those who will most benefit others later on. Yale should seek students who during their lives are likely to use their talents to the greatest benefit of others.

This criterion is, of course, as old as the origins of Yale: a Collegiate School "wherein youth may be instructed in the arts and sciences, who, through the blessings of Almighty God, may be fitted for public employment both in church and Civil State." Today we need to translate those words freely to emphasize the benefits to other human beings that can be made not only by "public employment . . . in church and Civil State" but in manifold ways: in the creative arts, medicine, research, teaching, economic organizations, philanthropic activity, community work, political action, public affirmation and dissent, governing and opposing, serving as guide, model, mentor, counselor, critic, dissenter, advocate, creating the new or preserving the old, and in other ways too limitless to mention.

To make the criterion somewhat more specific, we offer two additional observations: As we have already emphasized, it would be a mistake in recruiting and admitting our students to take the view that they are or should be mainly heading for graduate schools and careers in teaching and research. Most graduates of Yale College will make their contributions in other ways, from writing novels to designing new towns. Judged by the criterion of benefit to others, we think it proper that Yale students should go on to employ their talents for the benefit of mankind in many different ways, of which teaching and research will be only one.

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Although it should be only one of several criteria, Yale should continue to seek out students who are likely to make a major contribution as leaders in public affairs. In recent years, the very term "leader" has become distasteful to many students, so much so that even students who are clearly destined for leadership and give every indication of wanting to assume positions of public responsibility are likely to insist that they do not want to be "leaders." In a sample survey of Yale undergraduate opinion, for example, "a chance to exercise leadership" ranked sixth or seventh among desired occupational characteristics. This low evaluation of leadership, we believe, can be accounted for in part by a heightened concern for developing humane, non-exploitative relationships, a healthy rejection of leaders who abuse their positions, and a skeptical awareness of the potential corruptions of power. Yet we believe that in the future as in the past Yale graduates will prove to be eager for responsibility. Like alumni and faculty, the undergraduates tend to put the "opportunity to be original or creative" first in their ranking of desired occupational characteristics. Like alumni and faculty, too, undergraduates tend to put the "opportunity to be helpful to others and useful to society" near the top of their list of priorities. The fact that the term "leadership" has come, perhaps temporarily, to have negative connotations among young people should not obscure the fact that a large proportion of Yale undergraduates seek some form of service to others. And however much they currently disavow the term, in being "helpful to others and useful to society" their skills and capacities will place them in positions where they will have to accept responsibility for participating in decisions that are bound to have vital consequences for others.

Probably no one is more surely destined for positions of authority and responsibility than a minority group student who graduates from college and professional school during the next decade or so. It is worth remembering that the Black, Puerto Rican, and Chicano "minorities" are themselves, in total numbers, larger than the population of the United States during the first century and half of Yale's existence. American Blacks alone number more than the population of about 80% of the countries in the UN, and a dozen Latin American countries have fewer inhabitants than the Spanish-speaking population of the United States. Few developments will influence American life more profoundly than the ways in which members of these large minorities are enabled to overcome the discrimination and inequalities to which they have been subjected. To help educate the future leaders of these groups is as close as anything can be to the historic definition of Yale's purposes.

In order to sustain these purposes, we recommend that:

15 Efforts to recruit the best qualified minority group students both locally and nationally should be expanded and intensified at once.

It would be easy to underestimate how much change is required if Yale is to be open to the most talented and promising students among the severely disadvantaged American minorities. Even among highly promising minority group students who would profit from their undergraduate experiences at Yale, contribute to the education of other students, and exercise leadership later on, some may be expected to suffer at Yale from the results of education in poor schools and from difficulties

created by moving into an environment that will often be alien and disturbing to them. This is one reason for our recommendation (Number 8) that efforts be made to increase the number of members of minority groups on the Yale College faculty. The Intensive Summer Program recommended later (Number 55), which is intended to aid all students with academic needs not met by the regular curriculum, may prove useful to a minority group student with easily repaired deficiencies in specific academic areas.

Those who will benefit most from Yale's particularities. Yale should admit students who are likely to profit most from Yale's particular resources and characteristics.

We cannot stress too emphatically that the student who will profit most from Yale will need a high capacity for independent work, moral and intellectual self-direction, self-generated creativity, and autonomous, critical thinking. Because instruction in the College is carried out by a faculty of scholars, the student who will profit most is likely to be a student of high intellectual capacity, excellent preparation, deep curiosity, and strong motivation toward intellectual achievement.

The question is seriously debated whether Yale should not use its resources for the instruction of the less gifted student or those who are badly educated through no fault of their own. The principle of maximizing the net educational impact of Yale's resources might, in the abstract, justify precisely such a policy. Yet these resources, we have argued, include a faculty of scholar-teachers. Just as the teacher who is not a scholar is, in our view, likely to be deficient in teaching gifted, highly motivated, advanced students, so few scholars are likely to be good at remedial instruction. Therefore, for

Yale to concentrate on this kind of instruction would be, in our judgment, a wasteful employment of Yale's special resources.

Other things being equal, including abilities and potential contributions, a student who will take advantage of Yale's special resources is preferable to one who will not. Whether he is a prospective humanities or science major, the student whose proposed program will lead him to use the faculty, libraries, laboratories, and computing facilities should be preferred to the student who, because of intensely personal or closely circumscribed objectives, may seek only four solitary years, undisturbed by faculty or courses. Our preference does not rest on a judgment of the relative merits of the two approaches to education, but on the most effective use of Yale's resources. The student who wishes to draw largely on his own intellectual resources can rent a room off-campus, if he likes, but if Yale has virtually nothing to offer him except the degree, it is wasteful and unfair for him to displace someone who both needs and will profit from all that is available here.

A student who finds it congenial to participate both in the more intimate life of the residential college and in the larger scene of the University is also preferable, other things being equal, to a student who would be happier in the close-knit community of the small, independent college, or who likes the degree of impersonality and anonymity that a large university makes possible.

Those who will contribute most to other students. Yale should seek students who during their undergraduate years are likely to contribute most to the development of other students.

It has long been recognized that students gain as much

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from other students as from their teachers; often, no doubt, they gain more. Interaction among students is important in courses and for intellectual growth generally; it is crucial for other kinds of development. The attitudes, values, skills, and activities of students determine the style and atmosphere of a college, establish norms of intellectual seriousness, honor, trust, friendship, integrity, provide models for emulation, and thus in a thousand crude or subtle ways influence behavior and development.

It is therefore as relevant to ask of a prospective student as of a prospective faculty member what he or she has to contribute to the development of others. This is one reason why the criterion of intellectual achievement and promise ought not to be the sole criterion for admission. A rich variety of background and perspectives are essential to the life of the college.

The most qualified of any age. Yale should seek to admit without respect to age students who satisfy the criteria we have advanced.

Traditionally almost all students admitted to Yale College have been under twenty years of age. Veterans constitute the only major exception. We believe that the virtual exclusion of older students not only handicaps those who are thereby excluded but also deprives the younger students of valuable contact with older students. Motivation is a key factor in the learning process and is often much greater among students who return to college after employment, military service, or other interruptions in their formal education.

Then, too, if it is proper, as we have argued, to think of education as a life-long process, in which the undergraduate years are only an interlude, the opportunity to

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continue one's education in the special setting of the College should be open not only to the student newly out of secondary school but also to older men and women who may wish to advance their education. In the past, economic reasons combined with conventional conceptions of education to define a college as a place for youth to learn. Neither of these need or should define the college in the future, since the obsolescence of knowledge in a rapidly changing society creates growing demands for continuing education.

The more mature man or woman may on occasion meet each of our criteria better than the youth: they may have more to gain from Yale's particular resources and characteristics, they may have more to offer the development of other students, and they may have more to contribute to the benefit of others. Does it make sense to exclude these men and women because by conventional standards they are too old to be Yale undergraduates? We think not, and believe Yale should welcome applications for admission from everyone who satisfies the general criteria used for admissions.

For these reasons we recommend that:

16 Yale College should seek to include in each class a number of qualified applicants admitted without regard to age.

The most qualified of either sex. Yale should seek students who satisfy the criteria we have advanced without respect to sex.

The admission of women to Yale College in significant numbers was first recommended by the Committee on the Freshman Year in 1962, and a similar recommendation was accepted by the Yale Corporation in 1968. This

decision reflected not only Yale's concern for meeting the demand for first-rate collegiate education for women, but also the recognition by members of the Yale community that the presence of women as well as men is essential in a cosmopolitan university.

Yale College currently has a student body of 4,000 men and 850 women, a ratio of about 5 to 1. When a limited number of places are arbitrarily reserved for women in the freshman class, admissions standards for women are more demanding than those for men. Many women are denied admission even though they are better qualified than some of the men admitted. It was this dilemma which recently prompted five members of the Admissions Committee to state in a letter requesting that more women be admitted to Yale College:

> "As members of the Admissions Committee, it is demoralizing to see a quota system jeopardize the search for excellence; as teachers and deans, it is particularly painful to be executors of a policy we have found injurious to men and women now at Yale, students and faculty. It has been anguishing to work with a policy that conflicts with our highest hopes for Yale College."

Less obvious than the inequity created by denying admission to qualified women candidates is the fact that minority status itself creates problems for women students by putting them in a position very different from that of their male classmates. This is true in the classroom, in extra-curricular activities, and in the residential colleges. Women are in the minority, they are very visible, and for them anonymity and privacy are virtually unattainable. At the same time they are isolated from other women and denied adequate opportunities

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for friendships with members of their own sex. No matter how capable the women, men tend to dominate campus activities, they vastly outnumber women, and their position is bolstered by tradition and cultural expectations.

That a more balanced ratio of men and women makes for a healthier, more normal atmosphere on campus seems almost too obvious a case to argue here. On the other hand full coeducation will certainly not solve all the problems of a college age population. Many of the problems currently attributed to the small proportion of women among the undergraduates will be found to have other causes once the imbalanced ratio is corrected. Nevertheless, there can be neither a natural relationship between the sexes nor truly equal educational opportunities for men and women as long as the current imbalance continues. The imbalance creates unreasonable pressures for both sexes and it is difficult to judge whether men or women suffer more as a result.

A more equitable distribution of men and women could be achieved in one of two ways. The first is by a simple change in the proportion of men and women admitted to the freshman class. A one-to-one, two-to-one, or other ratio could be arbitrarily established. The admission of a fixed ratio of men and women would guarantee a more balanced student body but would offer no assurance that the most promising candidates would gain admission. If the size of the applicant pool for men and women should differ and a 50-50 ratio were fixed, for example, admissions criteria for the two sexes would again prove different.

A second alternative would be to fix the size of the freshman class, without establishing a sex quota. The best qualified candidates would be admitted and sex

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would not be a criterion in the selection process. The actual number of men and women admitted will of course depend on the overall size of Yale College, and the number of students in the freshman class, issues discussed elsewhere in this report. There is no firm evidence that the qualities we seek are sex linked; consequently, the proportion of men and women should be proportional to the make-up of the applicant pool if sex is not a criterion in the selection process and if the number of places available for women is not artificially restricted. In the face of cultural expectations and pressures, it is likely that the pool of applicants to national, private institutions of high prestige will continue to be weighted in favor of men for some time to come. For several years the University of Chicago has admitted men and women from a combined pool without a sex quota and has consistently had an entering class of three-fifths men and two-fifths women.

We therefore recommend that:

17 Admission to Yale College should be granted on the basis of qualifications without regard to sex. It is our expectation that this recommendation would result in a student body of approximately 60% men and 40% women. If at any point this policy results in a student body in which either sex constitutes more than 60% of the entering class, we recommend that steps be taken to remove the imbalance through active recruitment of applicants of the underrepresented sex.

The most qualified without respect to income. Few policies have done more to support Yale's aspirations

to excellence than the decision to admit freshmen without respect to their financial needs, and to make this policy effective by extending financial aid to every student who needed it to finance his education at Yale. The University's deficits have made this policy increasingly difficult to sustain. Yet the policy seems to us so clearly right if Yale is to have a socially diverse student body that it must not be abandoned. Although aid is primarily needed to insure that the qualified student from a low income family is not denied a place in the undergraduate body, it is also needed for some students from middle income families unable to meet the total cost of a Yale education. We therefore recommend that:

18 Financial aid should continue to be awarded as a combination of gift aid and loans, supplemented by student earnings and some form of tuition postponement.

19 The proportion of gift aid available in relation to total costs of tuition, board, and room should not be reduced significantly below the present level. In Yale's fund raising efforts high priority should be given to increasing the endowment income available for financial aid.

Full-time students. To preserve the residential character of Yale, and to enable students to interact with each other and with the faculty in the manner described elsewhere in this report, the majority of Yale students must be engaged in full-time study. We recognize however that special circumstances may arise which make it necessary or even desirable for some students to enroll on a part-time basis. We therefore recommend that:

20 Admission to Yale College should continue to be contingent on a student's willingness to study on a full-time basis, but provision should be made for exceptions to the full-time requirement in rare instances where circumstances make part-time study advisable.

Transfer Students. For the students involved, as well as for the Yale community, much is to be gained by admitting students of demonstrated ability who have already completed one or two years at another college or university. Some students will wish to transfer directly from another institution, others will apply after having interrupted their education for varying lengths of time. We therefore recommend that:

21 Some students admitted to the Degree Division each year should be transfer students. The number of students admitted to transfer status should be reviewed and revised periodically.

More students in the Sciences. Although, as we have pointed out, any admissions criteria including those recommended here must inevitably work to the advantage of some applicants and to the disadvantage of others, we believe that Yale College can and should continue to achieve a high degree of diversity in its undergraduate body. However, in at least one area, the Natural Sciences, we are convinced that Yale is neither recruiting nor properly selecting a sufficiently high proportion of students to give the College proper balance and to provide proper intellectual context and stimulus for the non-science students at Yale. While cur-

ricular reorganization and improvements in both the style and technique of presentation are urgently needed in order to hold the interest and excitement of a higher percentage of Yale's prospective scientists, improvements of this kind will not be sufficient by themselves. We must bring to Yale more students whose intellectual strength, breadth, and commitment to science are sufficiently great to carry them through a rigorous scientific program without slighting the unexcelled opportunities in the other areas of the University.

Admissions Policies

Many of our hopes and the success of many of our recommendations depend ultimately on the character of Yale's admissions policies and practices. If we can search out and attract to Yale the men and women who would best fit the opportunities and challenges of the University, then we can move confidently toward the changes suggested in the present report. Moreover, we believe that no rearrangements of setting or of curriculum will flourish unless we admit to Yale students who can both use well and add to the educational resources of the College.

The recruitment, selection, and attraction of qualified students is a demanding task requiring the fulltime commitment of a number of people who feel a professional dedication to the task. Their work should continue to be supported in strength. Further, because of its central place in the definition of Yale, the Admissions Office should be central in the interest and concern of the faculty of Yale College. There are several ways in which such an interest can be represented and enlarged. We will speak later to the institution of serious long-term studies of the admissions process. In addition, we be-

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lieve that the professional admissions staff, which has accumulated so rich a store of information and practical policy, and the faculty of Yale College, which has so important a stake in the results of the processes of admission, should be brought closer together in their joint study and solution of the problem of admissions criteria and procedures. Therefore, we recommend that:

22 An Associate Dean of Admissions should become an Associate Dean of Yale College; he should be the chief advisor to the Dean of Yale College on admissions.

Moreover, successful criteria of admission, based on adequate studies both at Yale and at other universities, can best be formulated with the participation of members of the Faculty. In order to achieve both balance and excellence in admissions, we recommend that:

23 The Admissions Policy Advisory Board should be chaired by a Yale College faculty member appointed by the Dean and should share with the Dean of Admissions the responsibility for working out the criteria appropriate for admission to Yale College.

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5 | The Setting of Undergraduate Life

The Residential Colleges

Probably nothing contributes more to the distinctiveness of undergraduate life at Yale than the residential colleges. The colleges reduce a student body of 4800 to human proportions. They form an indispensable requirement for the qualities of cohesion, accessibility, and humaneness that add so much to Yale's special character as a university-college. Initially an unfamiliar idea, after forty years the residential colleges have become such an integral and crucial part of Yale life that it is virtually impossible to think of the College without the colleges. Yet as they approach the half century mark, the residential colleges encounter problems that will have to be solved if one of Yale's major resources is not to be dissipated.

Amenities in the colleges. The residential colleges are not only among Yale's greatest assets, they are also expensive luxuries. The expense can be justified only if the colleges contribute significantly to raising the quality of life at Yale; this they can do if common spaces are attractive and intelligently used and if rooms are not overcrowded. Attempts to save money for the University by overcrowding or cutting down on the standard of fare in the dining rooms are, we believe, short-sighted: though some extra income may be gained by these devices, they undermine morale among students and fellows and make college life less attractive, drive students away from the colleges, and thus weaken their potential role in the life of the University. We must continue to be sensitive to mature undergraduates' needs for privacy and a decent place to live and work. False economy could, indeed, turn a precious asset into a liability.

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The standard of life in the residential colleges cannot be separated from another problem, the accommodations in the Old Campus. These accommodations are often more shabby and more overcrowded than those in the colleges; yet the majority of freshmen seem stoically — and often cheerfully — ready to put up with these conditions for a year, in the belief that things will get significantly better thereafter. To transfer students from poor conditions to another set of poor conditions is as unfair as it is demoralizing.

Considering the vital role of the residential colleges at Yale and the threat which overcrowding poses to their value, the space that the two new colleges would provide is desperately needed. Freshmen should enter fully into the life of their residential college, which means that they should live in their college. To abandon the tradition of separate residence of freshmen on the Old Campus or, more recently, in annexes, would become even more imperative, we think, under the academic plan we propose in the next chapter. Yet to bring Freshmen into the colleges at the expense of pushing seniors out would surely be no gain. Consequently, we have come to the conclusion, that we will ultimately need a total of 16 residential colleges at Yale. We recommend, then, that:

24 Construction of the two new colleges should proceed as rapidly as possible, provided that they be used to decrease crowding and not to increase the resident population of Yale College beyond its present level. Moreover, the new colleges should be constructed to provide flexibility in the use of space so that they may be adaptable to changes in the College over the next decades.

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25 The University should seek the funds necessary to convert the present Old Campus either into two residential colleges comparable to the existing colleges, or into other forms of residential housing. Thereafter, all freshmen should live in their residential colleges. Meanwhile, more care should be taken to respond to valid complaints about broken and inadequate facilities on the Old Campus.

If the colleges are to retain and improve their attractiveness to students and thus prevent discontent from driving more and more students off the campus, they will have to undertake some improvements. It is not our purpose to suggest here what all of these might be; clearly there can and should be a good deal of variation from college to college. We do however offer the following recommendations:

26 The college dining rooms must be kept as attractive locations serving good and plentiful food. The importance of the dining halls to the fabric of college life should be taken as axiomatic.

27 Each college should be encouraged to make a kitchen available (as some already do) so that students can occasionally cook their own special meals.

28 The space available in each college for student activities should be studied with an eye toward its modification and enlargement.

There are a number of reasons why the requirements of undergraduates for space in the colleges have changed over the last several years and are likely to change over the next decades. For one, the pattern of undergraduate interests is a shifting one (for example, toward a far greater interest in music and photography). Second, the increasing number of women in Yale College may change the definition of needed space in the colleges. And, perhaps most important of all, an increased emphasis on independent work will probably exert an increasing demand for work and study space in the colleges.

In particular, each college should work to develop a decent common room for its students. In many colleges, the common rooms have become corridors on the way to the dining hall, used for dumping coats and books twice a day and for an occasional meeting. Yet in many cases, minor changes in pedestrian traffic patterns and some small adaptations to existing doors and walls, could lead to the development of quiet, large, comfortable rooms where students could sit, talk, and relax.

Because of the rocketing cost of college maintenance it is essential to the survival of the residential colleges that students do more work on college upkeep. If anything like the current ratio between the cost of labor and materials on the one hand, and Yale College resources on the other is maintained, the colleges will go under. Consequently we recommend that:

29 Yale should develop plans by which each student should work a couple of hours a week on behalf of the college in which he lives, under the direction of skilled personnel from University Operations.

The Masters. The position of Master of a Residential College is perhaps the most challenging, frustrating, poorly defined, and least understood assignment in Yale College today. The role of the Master, who should be the central figure in a system that is one of Yale's major assets, is often both underrated and ambiguous. It is no secret that it has become increasingly difficult to find men and women who are willing and able to take on this consuming commitment for substantial periods of time. Without a consensus in the Yale community on the responsibilities and prerogatives of the position, it will not be possible for the Mastership to command the confidence and support needed through periods of crisis, change, and development.

We shall propose, in the next paragraphs, a series of concerns and objectives which can be broadly perceived as belonging to the College Masters. We expect and hope that these propositions will be debated and altered wherever necessary to achieve a consensus, since it is this consensus, rather than the details of the propositions, which seems to us to be essential in restoring to the Masterships the importance and distinction which they have traditionally had and which they must have if the Residential College system is to flourish. We recommend that:

30 Every Master develop a strong faculty Fellowship in his College and serve as Chairman of the Fellowship.

The Residential College fellowships offer a uniquely effective opportunity for faculty members to communicate with other faculty members outside their own departments or specialties, and for faculty members to

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communicate on an informal, non-academic level with undergraduates. Neither of these objectives can even be pursued without a strong, active fellowship with clear and decisive leadership. Given the diversity of the Faculty of Arts and Sciences this responsibility will impose on the Master the necessity for tolerance, patience, and an experience with and understanding of the faculty which will be very difficult for anyone but a senior member of that faculty. Exceptions to this rule are not impossible; but non-faculty or junior faculty Masters would need to possess these qualities to an exceptional degree.

During the past decade, the number of non-academic, hygienic, and housekeeping responsibilities transferred to College Masters has steadily increased and has resulted in a degradation of the position and a degradation of the role of the Master both in the eyes of the students and in the eyes of the faculty. If the position is to remain attractive to the very best senior members of the Yale community this trend must be sharply reversed. We therefore recommend that:

31 Each college should be assigned one person, perhaps a senior graduate or professional student, who would live in the college and act as assistant to the Master and the Dean.

Our concern expressed in these recommendations is not solely or even primarily based on solicitude for the welfare of College Masters. It is based rather on the conviction that if the Master is forced into a role which is drastically different from that of other senior faculty members, then to a large extent the value and significance of the Mastership is lost. In our opinion the most

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important function of the Master is to represent the University-College to the undergraduate community; he should, therefore, be and be seen as one of the intellectual leaders of his college. Again, this is not to say that only senior faculty can be Masters, but non-faculty Masters should maintain and pursue major creative or scholarly avocations. We recommend therefore that:

32 Masters should be enabled to devote a substantial fraction of their time to scholarship, teaching, or other professional activities.

Masters should be encouraged to propose to the Dean of Yale College groupings of intellectual interests which might be more effective in making each College a diverse yet coherent intellectual community. As far as is possible, the number of resident graduate students and the distribution of declared interests of entering Freshmen should be reviewed by the Master. For some years it has been the practice to assign all members of an Early Concentration Seminar to the same college on the principle that frequent contact between seminar members outside regular meeting hours would enhance the educational value of the seminar. We endorse the underlying principle and we therefore recommend that:

33 On the advice of the Master, students may, on occasion, be assigned by the Dean of Yale College to residential colleges in such a way that groupings of special intellectual interests are likely to arise. Grouping should be done in such a way as to ensure continued diversity and to avoid any case where a college would acquire a permanent interest in any given field.

Even though they were scattered from college to college in different classes, such groupings would provide a base from which truly distinctive intellectual activities could arise.

The Residential College Deans. Since its inception more than ten years ago, the practice of assigning one representative of the central Yale College Dean's Office, a College Dean, to each residential college has worked well. Indeed, it has been so successful and has answered the needs of so many students that many Deans have found the job extremely demanding. In almost all cases, College Deans have found that the demands on their time have been so great as practically to prevent substantial scholarly activity. These considerations have argued strongly against the appointment of graduate students to these posts or of faculty members who aspire to scholarly careers at Yale.

On the other hand, it is essential that College Deans either be members of the faculty or be particularly aware of the pedagogical concerns of faculty members. The Dean is often the most direct route of communication between students and their teachers, and no Dean can be effective unless he or she can communicate with students and faculty and can bring the two together. These considerations will be strongly reinforced by the requirements imposed by the academic plan discussed elsewhere in this report. The task of administering the plan in each college should be assigned to the Dean, and he should be relieved of housekeeping chores in line with recommendation Number 31.

Residential College Fellowships. The fellowships in the residential colleges are a potential source of great

strength to Yale College. If properly developed, they could attract oustanding faculty to Yale, and reinforce the loyalty of those already here. A college fellowship should be an active community involving faculty members from different disciplines and the students in their college.

At present the fellowships are in some disarray. The causes include: pressures of numbers; inadequate meeting places and little sense of the college as a community; the absence of any coherent functions for the fellows to perform; the absence of younger faculty who have not yet completed their second year as assistant professors; evening programs which attract Fellows who are bachelors or live near by, but discourage those who wish to be home in the early evening; fear that students are not interested in the fellowship, and the difficulty of breaking the ice in the dining halls.

The fellowships must be reinvigorated with a sense of community and purpose; doing so will increase faculty morale and thus strengthen Yale College as a whole. Moreover, the most crucial changes can be brought about rapidly and inexpensively. We therefore recommend that:

34 Every person regularly teaching in Yale College, regardless of his school of formal appointment, with the rank of instructor and above would be eligible on appointment to be a fellow of a college. Allocations to college fellowships should be made twice a year, by the masters in joint consultation, to ensure coverage of the various academic disciplines. A Yale College teacher should remain eligible for a fellowship until the expiration of his teaching term.

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35 In every college, space should be sought that will serve as the College Fellows' Suite.

In every college one of the guest suites or resident fellow's suites — or equivalent space — should be designated as the College Fellows' Suite. The Fellows' Suite would provide each member of the faculty of Yale College with a place to relax during the day, meet friends before and after meals, entertain and talk with visiting faculty, and so on.

We also recommend that:

36 Members of the faculty of the University not regularly teaching undergraduates and members of the administration not on the teaching faculty, should be eligible for the status of associate fellow.

Library

The maintenance of an outstanding library is essential to the continuation of an excellent Yale College. The current excellence of Yale College, we have argued, is based in part on the fact that it attracts and keeps scholars who are actively involved in research. If the quality of the library declines too much, scholars will go elsewhere. The acquisitions budget is dangerously low at present, and the problem of space within the Sterling stacks will reach crisis proportions within a few years; at the same time, there is intensely heavy use of the Cross Campus library and a hiding or hoarding of course books which places extra burdens on an already burdened and curtailed staff. We recommend that:

37 The most intense hunt should be made for funds to keep library acquisitions at a high level.

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It may be appropriate that a building within a few miles distance of the Yale campus be acquired and converted to a depository for volumes and periodicals that have minimal reader use, so as to free needed stack and study space in Sterling Memorial Library. The Cross Campus Library should be staffed in numbers sufficient to provide users with efficient access to the resources of The Library.

Athletics in Undergraduate Life

Exercise, sports, games, and contests are also an essential part of undergraduate life. In Yale College, the most important athletic activity is probably the intra-mural program. The high level of participation, the opportunities for competitive activity and the effect of the program on the general morale of the Residential Colleges are all of major importance. Fortunately, Yale has one of the strongest and most successful intra-mural programs in the nation and we believe that it is essential for the continued well-being of undergraduates to maintain this program at its current high level. The fact that graduate affiliates and Fellows have participated argues as well for an expansion of the program. But whether expanded or not, we recommend that:

38 Every effort should be made to maintain easy access to the highest quality coaching, playing areas, and equipment for intra-mural athletics.

While intercollegiate athletic programs at the varsity level demand far more of a commitment on the part of the student and can bring the satisfaction of athletic achievement and competition to fewer students than is the case with intra-mural athletics, the rewards associ-

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ated with these programs are often of great personal value. Yet one of the strongest arguments for sustaining a varsity activity in many sports is that the intra-mural program would wither without it. Experience at other institutions has shown that if the commitment to excellence in athletics and to the testing of this excellence through intercollegiate competition is dropped, it is no longer possible to generate or sustain the lesser but nevertheless significant commitment required to participate in organized competition on the intra-mural level. Undergraduates will still play frisbee or touch football in the college courtyards but, in the absence of varsity athletics, few will wish to make that modest effort to achieve the minimal level of competence which makes a team sport rewarding. For these reasons we recommend that:

39 Varsity programs should be supported and maintained in sports where Yale can be competitive with her peers without compromising the academic and personal standards.

Even with continued support of organized athletics, it is likely that the trend towards more individual and less organized athletic activity will continue. We urge Yale to encourage this trend and to provide facilities that all members of the University community may use for as many hours of the day and as many days of the year as possible. As long as the demand exists and the facilities are used, the rewards in health and morale will far exceed the incremental expenses required.

Physical Spaces and Campus Amenities

A complaint sometimes heard is that Yale is physically

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rather an unattractive place. It would be more accurate to say that Yale has been careless in wasting the spaces it does have available. Although this is not specifically a Yale College problem, the College might well take the initiative in humanizing some of its spaces. As in so many other aspects of changing the College, lack of money is a problem. Yet even without significant additional funds, imagination, sensitivity, and drive could all have an impressive effect on the quality of life at Yale.

To start at the simplest level: September, October and November, as well as late March, April and May, often bring glorious days to the Yale campus on which it would be a joy to sit outside and read or relax. Unhappily, there is almost nowhere to sit, no benches, no windbreaks, no sheltered enclaves away from traffic noises. In winters that often have a host of bright sunny days, there is nowhere to skate outdoors, or to throw a snowball. When energy levels are high, there is almost nowhere to run around, play football, throw a baseball or a frisbee. Open spaces seem to be seen as wasted, better used as parking lots.

Too many of the new buildings have blank and cheerless courts that bring no warmth or sense of human dimension. There are no carefully thought out routes, passing by attractive surroundings, that could inspire the flow and rhythm of a Yale student's day. There has been no attempt spatially to link the science complexes (now joined by some of the social sciences) on Science Hill with other Yale colleges and classrooms below. Compared with most campuses Yale has an astounding compactness. If people are unwilling to walk across it, that is a failure of environment — not simple laziness — and something should be done to correct it.

We strongly urge therefore that Yale immediately

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begin to consider ways to humanize its spaces for living and for study. At the very least it should buy some benches (or solicit student, faculty, and alumni funds for some benches) to put on the Cross Campus, the Old Campus, Beinecke Plaza, the sidewalk across from the Graduate School where the patient commuters wait for their shuttle bus, the bigger college courtyards, and Hillhouse Avenue. Windbreaks should be placed at certain spots — modelled on those at any bus stop or windy seaside in Europe — so that one could pause for a moment even on cold days, to sit and chat, perhaps, or read. Outdoor study and musing areas should be imaginatively considered. The inner courtyard of Sterling Library on a sunny day is a joy, and crammed with students. Other protected courts should be actively developed in existing spaces that are sheltered from the noise of traffic — behind the new Becton Engineering Building, in the Kline "cloister", at the foot of Kline Tower, perhaps in the space between Woodbridge and Beinecke.

Routes that draw the campus together should be designed. Thus the University might seek permission to close off Hillhouse Avenue between Sachem and Trumbull to all traffic, except perhaps for a narrow service lane, and to remove the meters. It could then plant more trees and grass on Hillhouse, and between some of the finest houses left in New Haven (which must at all costs be preserved) it could connect a broad mall, making a tree-shaded park that would link the lower campus with the Sciences and the Social Sciences.

The campus can be made more liveable in dozens of other ways. We have said nothing of using winter instead of groaning about it — of sled runs on Science Hill, an open air skating rink on Cross Campus coordinated

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with the late night snack bar in Commons, sun traps, and so on. Obviously costs will be cited as a prohibitive factor. We believe that this is one area in which a good deal can be done with very little. We therefore recommend that:

40 The President should appoint a committee of students, faculty, and alumni to develop a plan of development for Yale's physical spaces. The committee should have access to a small technical staff. It should bring to the President specific plans, proposals, and cost estimates.

6 | Structure and Process of Learning

During the many discussions that the Study Group had on problems of the curriculum, it became clear that there are a number of paradoxes or inconsistencies in Yale College that deserve further attention. For example:

Extensive faculty cutbacks have not led to a re-evaluation of the scope of those courses still offered.

Out of the enormous number of courses offered at Yale, a majority ve either very large or very small enrollments.

The need to have graduate student assistance in courses is widely acknowledged, yet many graduate students either are given swollen sections that are too large for good teaching, or else are asked to teach material in which they have limited competence.

Only a minority of Yale students are going on to graduate school in the Arts and Sciences, yet many courses seem designed only to prepare students for graduate work in the same subject.

Though large numbers of students are clearly satisfied with existing academic offerings and majors, many others have serious intellectual interests that are not met by existing structures.

The opportunities for individual faculty-student relationships are legion, but unevenly distributed. Thus some students work mainly in small sections or tutorials, while others are taught almost exclusively in large lecture courses.

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While some faculty members want to meet more often with individual students, others feel themselves overwhelmed by numbers of students demanding special attention outside the regular course structure.

Despite pressures on faculty time, a large number of once experimental special programs have become fixtures within the regular curriculum, without adequate review.

The differences in the work loads required by various courses are often so enormous that it is no longer clear how they can fairly be given identical "credit".

Advising in the colleges is often a shaky affair, despite the belief of many faculty members that it is very successful.

Arguments both for shortening the time required for the B.A., and for prolonging it by means of taking a year away from Yale, are becoming stronger and more coherent.

In considering these problems we have returned again and again to the criteria we suggested in the first chapter: the College should strengthen the student's capacities and incentives for life-time learning, provide a foundation for future development by adhering to the principles of distribution and concentration, and attain the special excellence that is made possible by the presence of the College within the University.

We reflected also on the policies that, as we urged in

the first chapter, seem to us desirable if these criteria are to be met: as early as possible, responsibility should be placed on the student for formulating an educational program to meet his needs; and the process of formulating this program should be constructed to insure, so far as possible, that the students' decisions are wisely made in the light of the options available.

We conclude that the best solution for Yale College will require particular attention to at least four matters:

> The appropriate range and limits of choice in constructing a program of study.
>
> The process of advice, guidance, and evaluation in constructing and executing a program of study.
>
> The sequence and timing of the program of study.
>
> The nature and content of courses and other resources available to the student.

We now turn to each of these topics.

The Appropriate Range and Limits of Choice

Limits set by faculty resources. Given Yale's commitment to scholarship and the pressing limits on financial resources, it is unlikely that the size or diversity of the Faculty can increase measurably over the next decade, or that the number or diversity of the curricular offerings can continue to rise. In fact, it is likely that we have already gone too far on both the graduate and undergraduate level and must pare down closer to the core of the curriculum in all fields. This is particularly true if we wish to maintain opportunities for teaching and

learning not only in the context of the large lecture but also in tutorials and small seminars.

Whatever the organization, it is clear that we are facing a period of strictly limited faculty resources. During the relatively brief period any given undergraduate is at Yale, he will necessarily confront a set of courses based in large part on what the faculty is competent and able to teach. This is not to say that any student may not learn what he needs to know in order to pursue his program of study. He must be given every opportunity to do so individually, for credit, and with as much assistance and supervision as possible.

It is also clear that over longer periods, the faculty can and should respond to a continuing demonstration of interest in new areas on the part of the students. However, it is unrealistic to assume that new courses or programs can be added to the curriculum in the absence of faculty enthusiasm or expertise and without removing courses or programs that require similar resources.

Options: Departmental Majors. Departmental majors are essential, among other reasons, to insure that Yale College graduates who have successfully completed their majors will have no difficulty in continuing their education in the best graduate schools. They are also appropriate for students who wish to concentrate in areas well represented by departmental activity. In departmental programs, however, it should be possible to combine some graduate courses with advanced undergraduate courses, perhaps pairing graduate and undergraduate students in seminars or tutorials that could enhance the value of the course for both. While many such courses might prove to be difficult for all but the strongest under-

graduates, the effort required for a graduate course is occasionally better invested than in the traditional senior essay. We recommend therefore that:

41 All Departmental major programs should be reviewed with an eye to providing combinations of graduate and undergraduate courses, particularly for students who wish to omit the first year of graduate or professional training following the Yale College degree. Each department should also consider carefully how its major program can be matched to related graduate or professional programs, so as to permit students to accelerate their total educational program.

Non-departmental programs of study. The traditional major is still appropriate and generally successful for many Yale undergraduates. Yet only students heading for graduate work in the arts and sciences (less than a quarter) — and not all of them — actually require the departmental major. A growing number of students would prefer, and might obtain greater benefit from, concentrating in an area common to a number of disciplines.

What is indeed the justification for the "major" system in the liberal arts curriculum? It can not be the need to train every student in depth in some discipline, since relatively few Yale students actually adopt careers in the discipline of their major. Rather, it arises out of a conviction that one can only understand the significance of the facts, theories, and ideas to which one is exposed in a number of different areas in the course of a liberal arts education if one has penetrated deeply enough into at least one subject to understand the limits on knowl-

edge and the effects that theories and ideas have upon the advancement of knowledge. We share this conviction; but we do not believe that concentration should be limited to subjects in which sufficient work has already been done to lead to the formation of a department. We believe that a substantial fraction of Yale College students of today or of the next decade would be better served by a program of concentration not based on a single department or discipline.

In sum, the College should provide an opportunity for students to concentrate in areas of knowledge or approaches to knowledge not necessarily represented by departments. We therefore recommend that:

42 Subject to the system of guidance and evaluation recommended below, students should have the option of majoring in a department or developing a non-departmental program of concentration.

The Creative Arts. The creative arts, by which we mean generally the visual arts, music, and creative writing, should play an active role in the college curriculum as subjects for both distribution and concentration. Indeed, given the importance of these activities in the very definition of a culture, it seems clear that they should be firmly based in the curriculum. By any standard, a liberal education requires familiarity with the history and practice of artistic expression. We therefore believe that substantial activity in one or more of the creative arts should be encouraged in every undergraduate program and that credit should be granted for superior performance.

In attempting to incorporate the creative arts into undergraduate education, a number of institutions have

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established physical or at least administrative centers for these activities. For a number of reasons we do not recommend moving in this direction at Yale. First, such centers are expensive both in the initial investment required and in their maintenance. While the expense could be justified if it were the only way to achieve the desired result, a single focus for the creative arts is probably not even the best solution. An arts center is likely to be inefficient and redundant because the arts are an integral aspect of other subjects from which they cannot and should not be excised. More importantly, however, the construction of a center would remove the responsibility for greater concern for the creative arts from the traditional departments, where it should and does rest. It would appear to imply that the creative arts are sharply separate from the accepted intellectual disciplines. It would remove from the arts precisely the critical and analytical approach and scrutiny which they should have. By doing so, it would widen a gap which is already far too wide.

Finally, the construction of a center would tend to lump together aspects of creative work which are in fact quite distinct, and would in all likelihood impose unnecessary restrictions on the development of one or more forms of creative activity. As a University College, Yale is committed to the principle that undergraduate education is best nourished by academic excellence and distinction at the very top of each field. This principle is no less important in the creative arts; it is therefore the professional schools and departments in the creative arts that must supply the strength of undergraduate programs in these areas.

This is not to say that greatly improved physical facilities for the visual arts, for music, and for drama

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are not needed at Yale. There exists a definite need for substantial new support for studio work, film making, editing and screening, musical performance and practice, and dramatic production. While no new buildings seem to us necessary, additional space will have to be made available, through reorganization and through renovation, in order to meet the needs generated by the increased activity in the creative arts which we are urging.

The major resource which Yale must continue to provide for the creative arts, as for all other activities, is a distinguished and dedicated faculty. A strong program of visiting artists, writers, and performers would be of great value and would take advantage of Yale's location within easy reach of a number of major areas of intense artistic activity. But the success or failure of any program in any one of the arts will depend largely on the faculty at Yale who have chosen to devote a major portion of their energies and talents to teaching as well as to practice. In order to emphasize our commitment to the creative arts in the curriculum and to make possible the kind of development which we look forward to, we have recommended in Chapter Three that:

10* All faculty members of the University with major responsibilities for the creative arts in Yale College should receive joint appointments to the Yale College Faculty.

The existence of a group of teachers and practitioners in the College is essential in order to generate the courses and programs required to implement our guideline and to create the opportunities for independent study in the

*Repeated from Chapter Three.

creative arts which Yale should offer. We believe that coordination with the professional and graduate schools in the creative arts can provide a stronger base for these programs than can the proliferation of additional departments for this purpose. However, resources of the College should be made available to ensure that this coordination occurs and that a strong and effective program results. We therefore recommend that:

43 The University should attempt to raise the additional funds and to allocate the space needed for the enlarged role of the Creative Arts in undergraduate education envisioned in this report.

Process of Advice, Guidance, and Evaluation

The structure of requirements, courses, options, terms, and years that help to define the path of the student through his years in Yale College is an historical product to which thoughtful reflection, conscious intention, the erosions of time, the by-products of past enthusiasms or appointments made for long forgotten purposes, the sins of omission, inattention, oversight, and plain forgetfulness have all contributed their bit.

Untidiness is not necessarily a vice in education, nor is a well-defined structure — often more illusion than reality — necessarily a virtue.

Nonetheless it seems to us that the structure of Yale College has become too rigid at points where a student's growth requires flexibility and too disorganized where the student would profit from coherence. Thus the difficulty of majoring except in a department is, often, too rigid. Yet a faculty that spends large amounts of time on minor changes in the curriculum has given little attention to the crucial process by which the student learns

about courses and majors and decides among the innumerable options.

College Mentors: Tasks. A pessimist would see Yale as a place where wise and knowing faculty members and intelligent, well-prepared students do not quite meet. There are several fully understandable reasons why the encounters are not as frequent or as intellectually moving as they might be, and some of the restraints will persist forever because of the different needs of university scholar and student, older and younger. However, the teaching traditions of Yale College and the potential of the residential college make possible a significant enlargement of the ground where the interests of students and the competence of faculty overlap. We propose, therefore, that a new curricular guidance arrangement be established.

In each of the twelve residential colleges, the Dean of Yale College should appoint some fifteen persons — whom we shall call "Mentors" — for terms of approximately three years. This group will be known as the Board of Mentors of the residential college. Roughly two thirds of the Mentors will be faculty members in the University, and one-third will be graduate students or members of the University staff. Faculty Mentors will be relieved of one-half their regular teaching duties. Graduate students who serve as Mentors will normally be drawn from those in the later part of their graduate work and they should be, in pay and perquisites, approximately the equivalent of partime Instructors.

It will be the task of the Mentors to advise and guide students in the design of a meaningful course of study (see below, the Entering Division), to participate with other Mentors in helping students to plan their Proposal

for the Degree (see below, the Degree Division), and to take part in the evaluation of the student's accomplishment of his Proposal. More concretely, Mentors will have four basic responsibilities: advising entering students, helping second year students formulate programs of study, reviewing the plans of third year students, and evaluating the completed work of fourth year students.

First year students: Advice on Entrance. Each Mentor will have primary responsibility for about six to ten entering students, initially assigned to him by the Dean on the Dean's best guess as to shared interests. Much like the most successful of our present freshman advisors, the Mentors will help First-Year students to plan how they can most meaningfully complete the Entering Division. Sometimes, Mentors will know enough about the student and about opportunities at Yale to give advice without calling on colleagues; frequently, it will be appropriate for a Mentor to seek the counsel of another Mentor in his College or another member of the Faculty. In any case, Mentors will meet as a group, periodically, to review the work of their students, to familiarize themselves on the variety of Yale's offerings, to assess the need for changes in educational opportunities in the College, and to make recommendations to the Dean about such changes.

Second year students: Planning Sessions. The most important responsibility of the Mentor is to help the student plan a Proposal for the Degree. Three Mentors from different Divisions of the University will form a degree-planning group with their students. Some group meetings may be held in which Mentors present statements of their own academic interests and the range of opportunities available in their Divisions; other group meetings may be given over to a discussion of the

requirements and expectations of graduate and professional schools; smaller groups defined by developing student interests may meet to consider critical questions in their field of interest, procedures that may well involve the preparation of formal essays; and, uniformly, each student will meet with the three Mentors, individually and together, to discuss his Proposal for the Degree and to seek their counsel.

Third year students: Review of Plans. A student who spends some time away from Yale, particularly one whose leave was planned to play a part in work for the Degree, will need to review his Proposal and its modification with his Mentors on returning to the campus. Less often, a student who does not leave Yale will wish to revise his Proposal after an exploratory period implementing it. Finally, a student transferring from outside Yale into the Degree Division will require review and approval of his Proposal in the first weeks of Degree Division work. The Mentor will assist the student in these reviews. It should be noted that a student will not necessarily remain with the same Mentor in both Entering and Degree Divisions; however, the Mentor involved in Review of Plans will routinely be concerned as well with the overall evaluation of the student's work.

Fourth year students: Evaluation. The process of evaluation, which determines whether or not a student has satisfactorily completed his program of study and is entitled to the Degree, takes place during a student's last semester. It will have several aspects. First, students will meet with the Mentors, either individually or in groups, to discuss a program, its strengths and weaknesses, and evidence bearing on the fulfillment of the program. Later, the three Mentors themselves will arrive

at an evaluation. The nature and extent of their evaluation will necessarily vary with the student and his program. In the case of a departmental major, the three Mentors will assure themselves by consulting with the Director of Undergraduate Study that the student has properly fulfilled the requirements of the major. In the case of students with non-departmental concentrations, the Mentors will design and arrange for an appropriate process of evaluation. This will require the Mentors to examine grades or other evidence on the quality of the student's work in courses, to consult with other members of the faculty familiar with the student's work, and in some cases to use outside examiners.

Finally, upon approval by the Board of Mentors in the residential college, the recommendation of the Mentors will go to the Yale College Degree Program Committee (described below). It will be the responsibility of the Degree Program Committee to insure that the process of evaluation has been adequate.

Summary of tasks. Figures 1 and 2 provide a schematic summary of the Mentorship plan. We have just described the plan from the perspective of the student moving through the traditional four years. From the perspective of the mentor tasks appropriate for each group of students will all take place during a given academic year. Although experience would almost certainly lead to changes from the schematic outline in Figure 2, it serves as a convenient summary:

> Under the existing calendar, during the first half of the fall semester of any given academic year, the Mentor will advise six to ten First Year students on their program of studies in the Entering Division.

Figure 1 A Schematic Summary of the Mentorships at Any Given Time, Assuming 12 Residential Colleges and 4800 Students

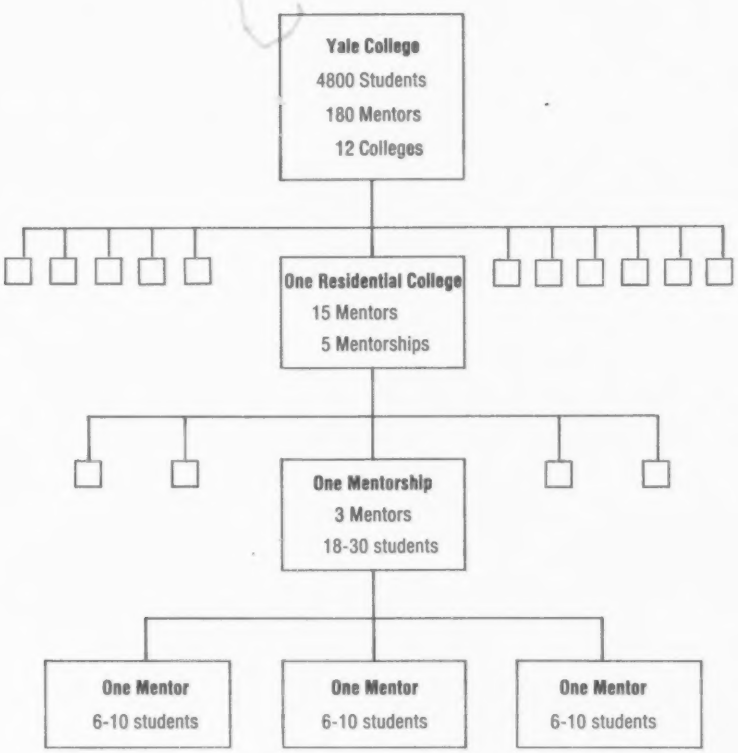

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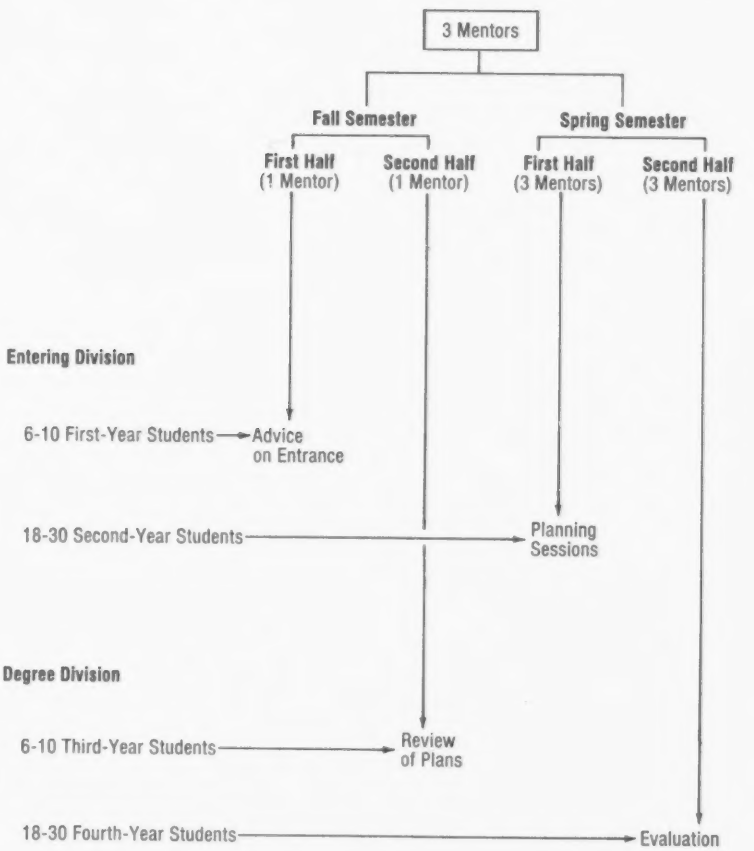
Figure 2 The Tasks of the Mentors



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During the second half of the fall semester, the Mentor will review plans for work in the Degree Division with his Third Year students. Under proposals presented later on, many of these students will be returning from leaves of absence.

During the first half of the spring semester, the Mentor and his Second Year students will join from time to time with the other two Mentors, and with their students, to discuss their programs for the Degree Division.

Finally, during the last part of the spring semester the Mentors will determine whether their Fourth Year students have satisfactorily completed their program of study.

Although each Mentor will be a fellow in a particular residential college, and his students will ordinarily all be members of that college, occasionally he may share responsibility for the guidance and evaluation of a few students from other colleges.

Appointments. Over the years, it is to be hoped that a large proportion of the Yale College faculty will serve occasionally as Mentors. The Mentorship must become neither a permanent duty nor an acquired right. Moreover, the Mentors should be drawn from all ranks and Divisions of the University, although some preference should be given to the appointment of experienced senior faculty. In general, a Mentor should be appointed to a term of three years with no possibility of reappointment until at least two years have passed. Furthermore, we recommend that:

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44 The Master and Dean of each residential college should prepare a list of nominees for presentation to the Dean of Yale College who, in consultation with the appropriate departmental chairman or Dean of School, would have final responsibility for the appointment of all Mentors.

Governance. We have already mentioned the Degree Program Committee. This committee, appointed by the Dean of Yale College, will have general responsibility for over-seeing the Mentorship program. In particular, it will seek to maintain College-wide standards of evaluation; as experience in the Mentorship program accumulates, the Committee will formulate methods of evaluation appropriate to particular types of programs; it will serve as a final court of appeal for a student whose Proposal is rejected by the Board of Mentors in his residential college; and it will certify that a student is — or is not — entitled to the Degree. We therefore recommend that:

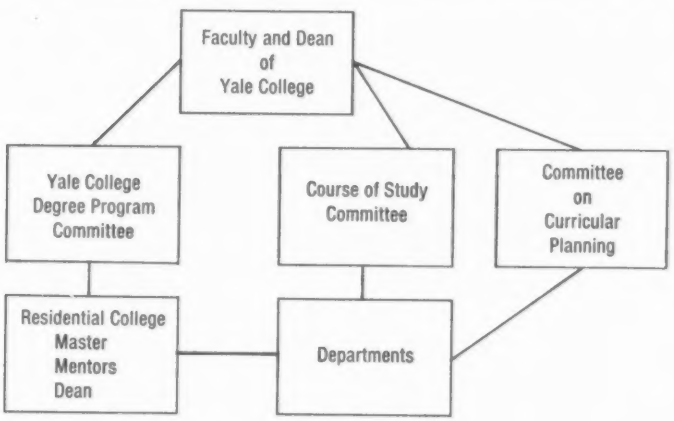
45 The Dean of Yale College appoint a Degree Program Committee to oversee the function of the Mentorship program and to insure that standards appropriate to the College as a whole are maintained.

Figure 3 indicates in a general way how the system would be governed.

Sequence and Timing of Programs of Study

We propose that the Yale College program be divided into two parts, an Entering Division and a Degree Divi-

Figure 3 Governing the Mentorship System


Faculty and Dean of Yale College
Yale College Degree Program Committee
Course of Study Committee
Committee on Curricular Planning
Residential College Master Mentors Dean
Departments

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sion, which will respectively meet the need for breadth and depth in Programs of Study.

The purpose of the Entering Division is to assure that students have some familiarity with the major dimensions of human inquiry and that based on such an acquaintance they can formulate informed plans for degree programs. Students will spend one to two years in the Entering Division, depending on previous preparation and performance at Yale. Provision will be made to permit students to offer advanced placement credit or equivalency examinations in meeting the Entering Division requirements. During the period a student is enrolled in the Entering Division he will normally carry a four course program.

When Entering Division requirements have been met and a student has prepared an acceptable Proposal for a Degree, he enters the Degree Division. Students will be encouraged to take a leave of absence from Yale before they undertake work in the Degree Division. Students will spend two years in the Degree Division. Students who elect a standard major must meet departmental requirements for the degree. That portion of the program not set by the department must be approved by the Board of Mentors. Although there will be no fixed course requirements in the Degree Division, a student's program will often consist of four courses during each of four semesters. Students who concentrate in an area based on more than one department must have their entire degree program approved by the Board of Mentors.

The Entering Division. Despite their high promise and intelligence, students who enter Yale will continue to arrive with widely uneven preparation for independent study. To take account of such variation and to provide

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new students with a sense of the range of possibilities in the College, the first two to four semesters should normally be spent in completing the student's preparation for independent study and in his exploration of fields not yet known to him. For most students, their work will fall into the following three groups.

The First-Year Special Interest Seminar. Every new student will join about 15 to 20 of his classmates in a seminar aimed to enlarge his understanding of a field of particular interest to him, to assist him in learning the ways of the College, and to give him guided practice in scholarly research and writing. During the summer before First Year, the entering student will select, from a list provided him by the College, a Special Interest Seminar which he will attend through the first semester of his stay at Yale. The purposes of the seminars are to deepen the entering student's comprehension of a field of special interest to him and, we hope, to establish a more lasting affiliation, by means of a common intellectual task, with a faculty member and other First-year students. The First Year Special Interest Seminars will be led by members of the College Faculty and by carefully selected graduate students.

Breadth. While in the Entering Division, it will be the responsibility of the student and his advisors to warrant that he has some familiarity with the major dimensions of human inquiry and that he is, thereby, ready to enter the Degree Division. In a University as rich and diverse as Yale, it has long been difficult to specify the fundamental requirements of a liberating education. In Pierson's account of the reforms of 1923, he comments:

> For it is a consequence of the elective system that once the offerings become varied, once the

curricular materials are really abundant, it proves next to impossible for a faculty to justify and insist upon any particular combination of courses while barring out others.

Nonetheless, as the College faculty has recognized ever since the introduction of electives, there are broadly defined areas of study which deserve every student's attention. They will vary from time to time according to the strengths of the Faculty and the usual preparation of students; they will not always be easily specifiable in terms of traditional disciplinary and departmental divisions; they cannot be uniformly or insensitively required for study; but, withal, the educated free man should, at the very least, have attended to several modes of scholarly search and study. As Yale shifts more toward independent definition of work toward the Degree, it is imperative that the Entering Division assure that the student gains sufficient breadth to make wise use of his independence. Since most entering students have some training in writing English and in the history of the United States, and elect work in those subjects, we are particularly concerned that the Entering Division provide course work and other ways of understanding abstract and quantitative methods, cultures other than the modern and the Western European, some aspect of artistic expression, the physical world, and biological and social systems. However, we recognize that a sufficient number of appropriate courses do not yet exist to satisfy the range and variety of student interest and preparation in these five areas; therefore, in the long run, it will be necessary for a Committee on Curricular Planning (recommended below) to engage the interest of faculty members in devising profound

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and appealing ways of studying the areas of breadth. We have a continuing prejudice against the watered and diminished courses for the person who will not be a mathematician or physicist or painter, but, while we recognize the peculiar difficulty of inventing courses that maintain their depth and rigor and still meet the student at his level of ability, the need seems to us beyond question. The Dean's Fund should give high priority to the support of ingenious creation of such courses and opportunities.

The Exploration of Novelty. One of the happiest parts of the first terms of college work is the introduction to areas of study not before known. Yale students have, in the recent past, found new approaches to learning and their lives in disciplines not typically taught in secondary schools such as Philosophy, History of Art, and Psychology. Mentors should urge the entering student to reach beyond his contemporary understanding and to explore new fields of inquiry. Introductory work in the traditional disciplines may profitably become, over the next years, less "a little bit of everything we know" and more a first statement in depth of the attitudes and methods of the discipline. The aim of the introductory course should not be so much preparation for the discipline as preparation of the student.

Acceleration. Of course, many students will come to Yale already able to meet some of our expectations for the Entering Division. These students may spend their effort in further study in areas of interest to them or they may propose to their Mentors to enter the Degree Division at the end of two semesters in the Entering Division. Moreover, intensive summer courses and equivalency examinations should be prepared to permit the dedicated or hurried student to meet the expectations of the Enter-

ing Division outside the usual pattern of study in course. Acceleration must be approved by the Board of Mentors and reviewed by the Yale College Degree Program Committee.

The Degree Division. After having satisfied his Mentors as to the adequacy of his preparation for the Degree Division, a student will, with the advice and counsel of his Mentors, prepare a Proposal for the Degree. The Proposal will contain a sensible program of study for the remainder of the student's stay at Yale. The program must be such that its satisfactory completion will warrant the award of the Bachelor's Degree. No specific number or kind of courses are required for the Proposal. The Proposal may consist of a traditional departmental major or a somewhat idiosyncratic arrangement for study; the Proposal may represent an integration of College work with continuing education at the level of graduate and professional school; it may, especially for the older student, be defined by specific vocational needs. We anticipate that some students will submit Proposals that bridge departments, Divisions, even Schools, and that others will submit Proposals of almost exclusive concentration in a single department. Both kinds of proposals are appropriate, under the guidance of the Mentors.

With rare exceptions, a student will spend four semesters in the Degree Division.

Any faculty member or group of faculty members may design a program representing a cluster of interests or ideas that would be suitable for a Proposal for the Degree. In addition, the Mentors in each college should maintain a notebook of approved Proposals that they consider to be especially promising. Sharing of this

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sort is important for at least two reasons — to widen the student's information about effective Proposals and to indicate evolving clusters of shared interests. The Degree Division program based on individual Proposals runs the risk of too much intellectual particularization. However, as intellectually coherent clusters appear in the Proposals, arrangements can be instituted to bring closer together students who represent each cluster. Two formal mechanisms can be advanced. First, Mentorships in the Degree Division could be established to represent emerging clusters and Mentors could be chosen in the light of the emerging definition of shared interests. Second, new courses on the administrative model of the residential college seminars could be invented as intellectual meeting-places for the students in each cluster. Like all new courses, these would be submitted to the Course of Study Committee for approval.

The usual process of review and approval of a Proposal for the Degree would take the following course. During the Planning sessions, a student will seek out the advice and recommendations of his Mentors. When the Mentors are satisfied with his Proposal, they will forward it to the Board of Mentors of his college (the group of fifteen who serve as Mentors for each residential college). Under most circumstances, the Board of Mentors will have the final decision about whether or not the Proposal is sound. If, however, the Board of Mentors does not approve the Proposal, the student may submit the Proposal to the Degree Program Committee. That Committee will also review all cases in which a student's work is judged inadequate by the Mentors after their evaluative sessions.

Thus a schematic presentation of a typical degree sequence might be as shown in Figure 4.

Summary Recommendation on Mentorships. In the light of the foregoing discussion, we recommend that:

46 Starting in the fall of 1973, Yale College should develop a degree sequence based on an Entering Division and a Degree Division. The general supervision of the student's work in these Divisions should be entrusted to College Mentors. These Mentors, of whom there should be about 15 in each residential college, will be appointed by the Dean of Yale College in consultation with the relevant residential college master and department chairman or School Dean. The Mentors will advise students as they enter Yale, help them plan their Proposal for the Degree and evaluate their overall performance. These programs, and the Mentors' evaluation of them, will be subject to review by the Degree Program Committee. Each student will spend two years in the Degree Division. The number of courses he takes in that division will vary with the program. Depending on the student's ability to meet the guidelines and prepare a satisfactory Proposal for the Degree, the student will spend two to four semesters in the Entering Division. In the Entering Division, the student will normally take four courses each semester.

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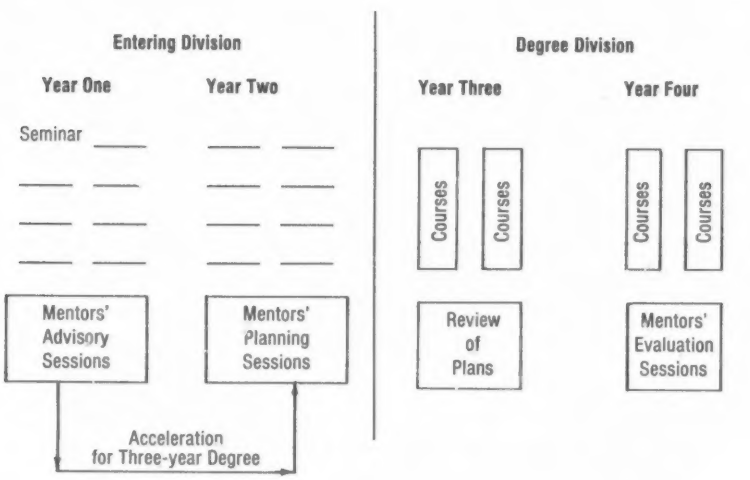
Figure 4 Schematic Portrayal of a Degree Sequence



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Resources for Students: Leaves, Courses, Skills

Time Off, Leaves, and Work Study. We have described the Mentorship without specific regard to the number of calendar years an education at Yale should occupy. Although different students have widely varying educational needs, we feel strongly that many students would profit from at least a year away from formal study. We recommend that students admitted to Yale be routinely offered the opportunity to defer their admission for one or even two years. Further, we believe that the program of study we have just outlined can be easily adapted to the student who wants to take off a year after either his first or second year at Yale. We warmly recommend that students be urged to consider the wisdom and value of spending some time away from the University, particularly those students who have in no way interrupted their secondary school years and who plan to go on to several years of study beyond Yale.

Two different sorts of leaves are likely to emerge for Yale students. One is time away without regard to its direct academic or professional implications — the year abroad, a year of work in industry or schools, the unscheduled year. We would expect that students who follow this pattern would inform their Mentors of their plans and keep them posted about their activities; but there would normally be no direct supervisory or advisory link between student and College. The other pattern is far more closely tied to academic and professional intention — on the model of externships in the Study of the City or on the model of the Five-Year B.A. Occasionally, it will be appropriate for a student to conduct research or to carry on some artistic activity away from Yale for a term or two. Programs of this sort, which would be under the direct and continuing supervision of

the faculty, either through the student's Mentors or through some special agency of the Faculty, would carry credit for the degree, and the student would pay his normal tuition. It will be possible for students to join one another and their Mentors in planning, reviewing, and evaluating their time away from Yale. We therefore recommend that:

47 Leaves should be freely available to students. As long as a student remains in good standing and gives sufficient notice of his intention to the Dean of his college, the student should be able to leave Yale for a year or (more rarely) two with the assurance that he can reenter at the end of his leave.

48 Students on ordinary leaves should not be charged tuition. However, students engaged in activities in behalf of their Degree Program under the supervision of Mentors should be charged tuition.

49 A member of the University should be appointed as Advisor on Student Leaves. The Advisor should be responsible for assembling listings of jobs and opportunities for service, both in and outside the United States, of the greatest possible variety, and for making these listings available to students contemplating leaves.

Teacher Preparation Program. Many Yale students are currently working toward certification as teachers at the secondary school level while they are completing their own Yale College degree programs. In many cases, this broadens their experience in valuable ways, and the

arguments that this training should continue — and be extended to the elementary school level — are persuasive. Through the Teacher Preparation Program, important links can be forged between Yale and the local community. Furthermore, the school teachers who help to train Yale students — known in the program as Master Teachers — perform a service to Yale which should be formally recognized. We therefore recommend that:

50 The Teacher Preparation Program should be maintained and funded adequately, and that it should be encouraged to establish firm contacts with a limited number of local schools. Master teachers should receive financial payment, be given free stack and use privileges in the library, and be eligible for the status of associate fellows.

Open Lectures. We have avoided recommendations on grading in the belief that this issue will probably have to be reviewed yet again following faculty decisions on the issues discussed in this report. However, it is clear that one of the primary elements in all such discussions in the past has been the desire to encourage students to experiment and to expose themselves to new areas of knowledge without the threat of undue penalty because of lack of background or special talent. To further this aim selected faculty members should be invited to give a lecture series in the form of a course open to the public. Open lectures would increase the range of general topics that could be studied by Yale students; they would also be open to Yale employees, New Haven teachers, their more advanced students, and interested residents of the New Haven area. A series of eight to a dozen lectures would be devoted to basic developments and problems

both within and across the accepted academic disciplines. They would not necessarily be courses with grades, or required readings. Open lectures would be given in the evenings or at weekends, and would be publicized throughout the New Haven area as well as throughout the University. We therefore recommend that:

51 Selected members of the Yale College Faculty should be invited to present a series of open lectures.

In principle, such "no-grade" courses could play an important role in helping students to make more intelligent decisions about their degree programs and could serve as points of departure for further study and concentration.

New Introductory Courses. No period of a student's college career is more critically dependent on the structure of the curriculum than the first. It is at this point that most students are introduced to a vast amount of material which is either completely new or uses approaches so different from those to which the student is accustomed as to make the material effectively new. There is considerable precedent at many major universities, and at Yale through the Directed Studies Program, for the formulation of a special Freshman curriculum in which the emphasis is on presentation of a very large range of material in a highly integrated manner. While this approach has sometimes been successful in the past, we doubt whether Yale should move in this direction when there are already strong reasons for breaking down distinctions between disciplines and bringing the techniques

and viewpoints of many disciplines to bear on a given problem.

Earlier we indicated some broad distributional guidelines that we feel are essential for breadth. To enable students to satisfy these guidelines, special introductory courses will need to be developed. Considerable attention and energy should also be devoted to strengthening introductory courses in all major fields or sub-fields. Much is already being done to make these courses appropriate for students at any level wishing to acquire a good grasp of a field and a good perception of its relationship to other fields. These developments should be encouraged and strongly supported.

Elimination and innovation in courses. Even if there were no budgetary pressures, it would be time for the faculty to review the courses offered in Yale College in a systematic and very nearly complete fashion. The need to consider our introductory courses would itself justify a review. In addition, there are problems of duplication between departments, overlap between graduate and undergraduate courses, omissions from the course of study, and probably an excess of courses too narrow or too specialized. For all these reasons, we recommend that:

52 Within the Course of Study Committee a special Subcommittee on the Curriculum should be appointed to conduct, over the next several years, a thorough review of the courses offered in Yale College, with a view to reducing the total number offered each year.

53 The Dean should be authorized to establish a faculty-student Committee on Curricular Planning

> charged with the task of identifying inadequacies in the curriculum, including course offerings. Among other tasks, it should determine whether or not the needs of non-majors are adequately served by existing introductory courses. If not, the Committee should explore with the appropriate department or departments, or in special cases the relevant Divisional Committee, the best means of overcoming the deficiency.

A number of procedures may be useful in undertaking these demanding and difficult tasks. We suggest that the Chairman and Director of Undergraduate Studies of each department, together with their colleagues, review the offerings of their department, with particular attention to overlap, omissions, overspecialization, and the possibilities of offering some courses only once every other year. The new course offerings for each department should be presented by the departmental chairman and Director of Undergraduate Study to the Sub-committee on the Curriculum of the Course of Study Committee. It will be the essential task of the Sub-committee to study relations among courses in different departments and to inform themselves about the specific curricular objectives of each department.

However, as we reflect on the fact that the Yale catalog has grown in eighty years from sixty courses to nearly 1600, we conclude that the more important educational goal of the review is to produce by vigorous pruning a tougher and healthier curriculum than we think exists at present. It seems clear to us that the Sub-committee on the Curriculum must not be merely responsive to requests presented by departments but must instead take a

critical stance based on a larger view of curricular needs than any single department is likely to have.

A reduction in the number of courses, whether resulting from a review of curricular objectives, changes in the calendar, budgetary reductions, or all of these, will necessarily increase the average course size. For this and other reasons, instructors will need to consider alternatives to the conventional options — the tutorial or small seminar in which independent work by students can be encouraged, or the large lecture with or without sections.

We believe that larger courses can and should be reorganized so as to encourage a significant amount of independent work. Graduate students might be allowed to participate in ways more creative — for both the student and the instructor — than the usual section. In some courses, for example, graduate assistants might be specifically selected in order to provide a variety of approaches and to concentrate on problems of special interest to them. Undergraduate students could be assigned to work with graduate assistants on the basis of their common interests. Undergraduates might also be encouraged to interact during the duration of the course with all the graduate assistants on an organized but flexible basis, rather than seeing only one, and only on a rigid schedule. In these ways a course might combine broad coverage with an opportunity for concentrated study by the student.

Course Descriptions. It is often difficult for students, working from the Course of Study Bulletin (possibly supplemented by the Course Critique) to get a coherent notion of what a given course is going to be like. There is also no way — short of asking each instructor — to

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ascertain what the readings or the problems in the course are going to be. This means that students do not have a chance, should they so choose, to prepare in advance for courses. We therefore recommend that:

54 All faculty members teaching courses in Yale College should submit a one-page outline of each course, briefly stating what they are going to teach, and how. They should also list a selection of the books that they are going to assign, and some suggestion as to the relative importance of the books. Each Department should keep a file of these outlines in the office of the Director of Undergraduate Studies, and should send a copy to each Mentorship, to assist them in planning courses of study.

Study Skills. A number of collections of knowledge do not fit the usual definition of a Yale College course but support consequential intellectual activity. The range of such "skills" is wide although the boundaries of the domain are not always obvious. The list clearly includes Rapid Reading, Elementary Computer Programming, and Foreign Languages; less obviously classified as "skills" are Calculus, Statistics, and work in the elementary Sciences and Social Sciences. It would be easy for a new Study Skills Office to become an ugly stepsister of the Faculty, used by the harassed dean to save (or to appear to save) the incompetent or ill-prepared student, but never the fully assumed responsibility of any permanent College institution, departmental or decanal. Rather than have a non-faculty agency fluttering somewhat helplessly beyond the purview of the Faculty, we propose that an Intensive Summer Program be established. Normally, all

courses in the Summer Program would be taught by regularly appointed members of the Yale Faculty or by special faculty appointed with the usual attention to quality. The specific function of the Program would be to make more opportunities in the normal course of study available to students in the College. We therefore recommend that:

55 An Intensive Summer Program should be established in order to widen the opportunities of Yale students to take advantage of the usual offerings of the College. Courses in the Program will typically be taught by members of the Faculty and will be available to students on a fee or scholarship basis.

Careful planning, both of resources and of need, will necessarily precede the specific definition of the Program. However, it is possible to suggest the following examples of valuable courses:

Languages. On the model of the Summer Language Institute, a student may enroll in an intensive introductory course in a foreign language.

Mathematics. A concentrated course in Calculus will prepare students to enter courses in the physical and biological sciences earlier or at a higher level.

Computer Programming. A course which introduces students to computer languages and the theoretical issues of programming, as well as to the practical issues of building computer-assisted solutions of problems, would open new opportunities to students in the social and natural sciences.

Courses Preparatory to Medical School. Preparation for medicine can stand as an example of courses to help

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students change or quicken their preparation for careers. Clearly, there are a number of other courses (e.g., Statistics, Elementary Chemistry, Elementary Physics) that would amplify the possibilities of Yale College.

Reading and Writing. Some students would also profit from a course on the efficient reading of college-level books and the writing of clear prose.

Resource Center. In addition to the Intensive Summer Program as a setting where students may study with the Faculty, we believe that a Resource Center should be established in the College that would make available to students tapes, filmstrips, videocassettes, courses of programmed instruction, and other materials for self-instruction. Over the last several years, the technology of outside-the-classroom instruction has advanced markedly and there exists an increasingly large amount of teaching materials useful to the college student. The Resource Center would require a small staff to catalog and monitor the collection of resources, but, by and large, the Center would stand as a setting where the interested and committed student could seek out instructional materials. Again, the Center is likely to be of special value to the student who wishes to move ahead on his own in the area of mathematics or languages, although the collection should not be confined to those areas. We therefore recommend that:

56 The University should establish a Resource Center for self-instruction.

Elimination of Special Programs. If, as we have recommended, introductory courses were markedly better adapted to students' needs, and if the College adopts

more flexible requirements for the degree and more opportunities for independent work, we see little reason for the continued existence of the Divisional Majors, Directed Studies, Early Concentration, and Scholars of the House. Virtually everything intended by these programs could be achieved under the new structure, and the resources now devoted to them might be better employed in perfecting the new arrangements. We therefore recommend that:

57 The Divisional Majors, Directed Studies, Early Concentration, and Scholars of the House should be terminated by the end of the academic year 1973-74.

If these special programs are dropped and changes along the lines of this report are adopted, we anticipate that new proposals will arise, based on the experience of the older programs but reflecting newer priorities or emergent possibilities.

To encourage fresh thinking and to increase the resources available in Yale College, we also recommend that:

58 The residential college Seminar Program should be reviewed to determine the extent to which the supporting funds might be used in more innovative ways.

Special Needs

The Dean's Fund. In order to permit the power and flexibility necessary to initiate new patterns of curriculum in Yale College, particularly those that do not easily fall to a single department or that may be taught by an instructor outside the usual definition of a faculty member in Arts and Sciences, money must be provided to the Dean's

Office. A special Dean's Fund could be used to support recommendations for term appointments outside the usual departmental structures, to support visiting lecturers and artists, to provide the materials and assistance necessary to invent new courses, and, especially,to make grants to departments or Divisions of the University for the development of new disciplinary and interdisciplinary College courses, stretching occasionally across Schools. As new funds become available to the University, some priority should go to the allocation of a proportion of such new resources to the Dean's Fund as well as to the departments. Retiring some of the special programs, as we recommended earlier, would free some resources for the Dean's Fund. The present college Seminar fund will also be able to allocate some of its budget to Mentorships and special courses in the residential colleges. In the light of these considerations, we recommend that:

59 The Provost should establish a Dean's Fund under the direct supervision of the Dean of Yale College and allocated by him, for the purposes discussed above, with the advice of whatever advisory group from the faculty he may wish to create.

Continuing Self-Study. No college or university, including Yale, is likely to achieve or can sustain a high order of excellence in the future without far more systematic self-examination than has been the case in the past.

A number of our recommendations are of an experimental and exploratory cast. Unfortunately, there has not existed in the University an office specifically charged with the review and formal assessment of experimental

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programs and procedures. Thus, the Faculty has moved from decision to decision almost exclusively without quantitative or even systematic data about the results of earlier decisions; for example, changes in the distributional requirements, in grading, and, even of greater consequence, in admissions principles and methods. The Study Group believes that the establishment and support of the Office of Institutional Research are particularly important as the College begins to try out other innovations. We recommend that:

60 The Office of Institutional Research should take on, as its regular responsibility, the tracking of innovations in the curriculum, in the evaluation of teaching, and in procedures of admissions. In the last instance, especially, there should be intensive followup studies of groups of students to assist the Faculty and the Admissions Office in determining the implications of their policies about who should come to Yale.

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Appendix | The Problem of Resources

The recommendations scattered throughout this report necessarily compel us to ask whether Yale has the resources — in skills, time, attention, and money — to support excellence in the ways we propose. Hovering over all our deliberations and proposals has been a yet more serious question: Can Yale reasonably expect to have the resources in the next several decades to support undergraduate education even at the present level?

Although it was not our charge to solve the university's financial crisis by means of educational reforms, we assumed from the outset that our recommendations ought to have a reasonable chance of being achieved within the resources that we thought would be available to the University and the College over the next decade and beyond. We realize that financial limitations may make it impossible for all that we propose to be brought into being in the next year or so. Most of our recommendations, however, do not require new funds but rather a shifting of present resources, including faculty time and attention, within the College and the University.

Nonetheless, if resources that are now available for educational purposes are drastically reduced in order to eliminate continuing deficits, then our hopes for attaining a unique excellence in Yale College are probably illusory.

Cost of the Mentorships

The Mentorship was in part designed to provide an extensive re-shaping of the curriculum without any increase in financial costs. Nevertheless, the question still arises whether by shifting some of the time of the faculty from classroom teaching to the Mentorships an excessive reduction in the number of courses or an excessive rise in average class size would result. Our calculations

suggest that the consequences would not, on balance, be severe.

In 1971-72 the total Yale College faculty in the ranks of lecturer and above (including visiting faculty) is 772. Counting only regular, full-time members and therefore omitting lecturers, visitors, acting instructors, and the like, the College faculty numbers approximately 640. If we assume that some further reductions will occur in 1972-3 and that around a fifth of the faculty will be on leave during any given semester, we arrive at the rough estimate of 500 full-time members of the Yale College faculty teaching each semester.

With 15 Mentors in each of the present 12 colleges, a total of 180 Mentors will be required. We have assumed that about 60 of these will be advanced graduate students; the remaining 120 will be regular faculty members, drawn about equally from the tenured and non-tenured faculty. If the Mentorship is assumed to occupy half the teaching time of a Mentor, Mentorships will, in total, amount to 60 full-time equivalent members of the faculty, or less than 8% of the entire Yale College faculty, less than 10% of the regular full-time faculty, and 12% of the regular full-time faculty estimated to be teaching in any given semester.

These percentages may also serve as estimates of the reduction in the number of graduate and undergraduate courses taught, if there were no departure from the present calendar. A reduction of this magnitude seems to us well in line with the decrease in course offerings that we recommended earlier on its own merits. If the Extended Semester Plan is adopted and half-semester courses are introduced, the cost of the Mentorships measured in course offerings would be even less and could be negligible.

Possible Solutions to University Deficits

Although it was not our charge to investigate solutions to Yale's financial problem, we found that we could not ignore them if we wished to make firm recommendations on educational matters. We have therefore consulted extensively with members of the University and have come to certain preliminary conclusions. What follows is a judgment based not on our own direct analysis but on the views of those charged with conducting or reviewing Yale's fiscal affairs.

Painful as it may be, the fact is that expenditures and income must be brought into balance. The alternatives for doing so include:

Reducing expenditures by:
- Cutting financial aid to students
- Further cuts in the faculty
- Freezing or cutting faculty salaries
- Reducing faculty time on leave
- Abolishing departments with few students, high research costs, or uneconomical faculty-student ratios.
- Eliminating entire schools
- Cutting back non-faculty personnel at all levels
- Using all students as a work force

Increasing income by:
- More skillful management of the existing half-billion dollars in endowment
- Federal aid to higher education
- Raising more funds from alumni and foundations
- Raising tuition
- Increasing the number of tuition-paying students by
  - Having more students enrolled at the same time
  - or

Having more students enrolled in any given year
by using the facilities all-year round
or by using the facilities for a longer period, e.g.,
10 months

It is occasionally suggested that deficits could be reduced, if need be, by draining the University's capital endowment. Perhaps a few advocates of this solution would be willing to run the risk that in time the University would simply come to an end, at least as a private institution. Doubtless most members of the Yale community would not. In any case, the option is not really at hand, for only about $25 million is legally available for meeting deficits — a sum that would be exhausted in a few years.

Yale's deficits cannot be eliminated either by reducing expenditures for non-academic purposes — a solution many faculty members espouse — nor, in all likelihood, by raising enough new income from sources other than tuition. If this diagnosis is correct, then either expenditures for such strictly academic purposes as faculty salaries, fellowships and scholarships must be reduced beyond the levels now projected for 1972-73, or new income must be obtained by increasing the total amount of tuition received from students, or both. These solutions clearly threaten to reduce the quality of Yale education. More specifically, they endanger one or both of the two components that make up the special combination on which the excellence of the College within the University depends: a creative faculty of scholar-teachers offering instruction in variety and depth, in a college of human proportions. If such a combination is too expensive for Yale and the country to afford, then our report is founded upon sand.

Consider the expenditure side. If the faculty shrinks below the size projected for 1972, if graduate fellowships are cut back further, and if scholarship funds decline, critical interconnections will probably begin to unravel. A small faculty and graduate school will make the University less attractive to the best scholars and graduate students. Because reductions can be made only among the non-tenured faculty, the average age of the senior faculty will rise; the age gap between the senior and junior members, which is already great, will grow. If as a result of these changes, the scholarly distinction of the University declines, the College will in time find it more difficult to attract the best undergraduates. As scholarship funds are reduced, diversity will also diminish. Thus the excellence of University and College may spiral downward.

It is clear that substantial savings would be incurred if Yale were to close one or more of its professional schools. A university college not located in a large urban center depends on the existence of the various professional schools, particularly in the arts. Preliminary information has led us to conclude that savings which would be achieved by closing professional schools would in all likelihood be offset by grave disadvantages to education at Yale. The Medical School operates largely on governmental funds, the Law School is virtually self-supporting, as is the Nursing School. The remaining schools not only provide much valuable instruction for Yale's undergraduates but add immeasurably to the cultural life of New Haven.

If expenditures on academic objectives cannot be reduced drastically enough to eliminate current deficits without running readily foreseeable dangers, then the pressure rises to find new ways of increasing income

from tuitions. Even with the deferred-tuition plan introduced this year, Yale may already have reached the limits on tuition, at least at 1971 levels of prices and incomes. Thus the argument appears to lead inexorably toward increasing tuition income by increasing the total number of students who pay tuition, with no significant increase in the cost of educating them. In short, the ratio of faculty to students must go up. The danger here, then, is to the other main component of the combination we seek to preserve and strengthen, the intimacy, accessibility, and flexibility that would be eroded as the student body grew larger, particularly but not only if there were no corresponding growth in undergraduate faculty. Alternately, tuition income could be increased through more intensive use of existing facilities and faculty.

If it is true that the gap between income and expenditures cannot be fully eliminated except by moving in one or both of the directions we have just described, then we are posed with a dilemma which seems to have no altogether desirable solutions. Nonetheless, some of the possible solutions clearly are more consistent with our objectives than others. We therefore urge that the following considerations be kept in mind in weighing the pros and cons of alternative financial solutions.

1. Only as a last and admittedly desperate measure should any financial solution be adopted that would seriously impair Yale's chances of achieving the objective we have so strongly stressed: a College small enough to facilitate accessibility, responsiveness, humaneness, and sense of community, a University faculty of scholars large enough to provide instruction and resources for undergraduates of exceptional range and depth. If the unique potentialities that we believe exist at Yale are unattainable for purely financial reasons, then it would be

wise to consider whether Yale should not, in effect, deliberately cease being a great university and concentrate instead on being simply a very good college, or, conversely, deliberately give up the effort to build a great undergraduate college and concentrate resources wholly on the graduate and professional schools. Excellence at one level would be preferable to mediocrity at both.

2. On the expenditure side, a number of economies are consistent with the general objectives and concrete proposals of this report. These include:

Eliminating most classes with tiny enrollments, for example, classes with fewer than five students.

Making greater use of graduate students in teaching, particularly in tutorials with five or more students.

Employing undergraduates in need of financial assistance in all aspects of work at the university for which they are suited, as and when openings become available.

3. On the revenue side, of the two major ways of increasing tuition income, one seems to us clearly superior to the other. Even a small increase in the numbers of undergraduates in residence would intensify problems of crowding in housing, dining halls, the libraries, laboratories, and elsewhere. Yet a small increase in the number of undergraduates would hardly solve the financial crisis of the University. Conversely, an increase large enough to solve the financial crisis would, in our view, destroy the quality of undergraduate life at Yale and, in the long run, the attractiveness of the College to the best students. Consequently, if it is demonstrated that the University's financial crisis cannot be solved except by increasing income from tuitions, a solution should be sought that would increase tuition income but would not increase the

number of students in residence during any given term. Clearly such a solution would require a revision of the academic calendar.

It is possible to maintain the student body in residence at our proposed figure of 4800, and increase the total number of students over a four year period by, say, a third, by any one of a number of changes in the calendar. The one we find most clearly advantageous for the ends and means discussed in this report is the Strengthened or Extended Semester Plan. Under this plan:

The current 104 weeks of instruction spread over four years would be concentrated in three years of residence.

The calendar would consist of two semesters, fall and spring, each approximately of the same length. The fall semester would run from the beginning of September to the end of January, the spring semester from February to the end of June.

Courses might be either full semester courses or half-semester courses.

Present term courses would be converted into extended semester or half semester courses depending on the subject matter to be covered.

Under the new calendar the six extended semesters would result in approximately the same weeks of course work as is now the case with eight terms, of course with flexibility appropriate to the recommendations made in this report.

The time needed for a degree would still remain four years, in the typical case, but students would ordinarily complete the requirements for the degree in six extended semesters, rather than eight terms as at present, and would take one year off for private study or work in society.

The cash cost for a Yale degree to the average student would drop slightly — by the cost of room and board for one year.

The extended semester plan would enable the College to admit 1600 entering students each year, an increase of one-third. However, since students would complete their work toward the degree during three years of residence rather than the current four, only 4800 students — as at present — would be in residence at any given time. Because the number of students in residence would remain the same as at present, there would be no significant increase in costs. Yet income from Yale College tuitions would rise by one-third because of the one-third increase in the number of students moving through Yale in a four year period. A one-third increase in income from tuitions in the College would reduce current University deficits by a very substantial margin.

Financial Implications of the Admission of More Women

The admission of more women can affect alumni giving in two ways, by altering the contributions from existing alumni and by affecting the giving of future alumni classes. The effect on existing alumni will depend in part on the efforts made to explain policy changes to alumni. It is clear that some alumni will support a move towards greater co-education while others will oppose it.

The effect on contributions from future alumni is easier to predict. We believe it likely that about 40% of Yale's matriculants will be women under the admissions scheme we have proposed. Therefore an entering class of 1600 students (under the Extended Semester Plan) would probably include about 640 women and 960 men. Conservative estimates, based on past experience at other

institutions, indicate that women contribute at about one fourth the rate of men to alumni fund drives. On this basis, the contributions from women alumnae would more than offset the anticipated decrease in contributions resulting from the negligible reduction in the number of male graduates. We conclude therefore that the change we are proposing would not have a major effect on future contributions by alumni.

Contributions to the Yale endowment income come primarily through bequests and gifts from older alumni. The effect on endowment giving by future graduates resulting from the admission of women will have a 20-25 year lag and is therefore impossible to calculate. Clearly, massive efforts should be undertaken immediately to insure that gifts by Yale's new generations of women graduates are raised to the highest levels possible. In particular, the Alumni Magazine should cover the activities of Yale's women as fully as the men, and a separate effort should be made to keep in touch with Yale women as they embark on their new careers.

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